AN INTRODUCTORY

Clinical Lecture

ON THE

CIRCULATION OF THE BLOOD,

IN ITS BEARINGS ON PRACTICAL MEDICINE AND SURGERY GENERALLY, AND OPHTHALMIC MEDICINE AND SURGERY IN PARTICULAR.

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GENTLEMEN,—A correct knowledge of the circulation of the blood in all its details has such a universally important bearing on practical medicine and surgery, that, in my opinion, no more appropriate subject for an introductory clinical lecture in any department, but more especially that of ophthalmic medicine and surgery, could be chosen. I therefore beg your close attention to the observations I shall make in the discourse, of which I am now about to deliver the first part.

Before Harvey's time the opinion was professed that the blood poured by the venæ cavæ and coronary vein into the right side of the heart is transmitted therefrom by the pulmonary artery to the lungs, and that after passing through certain alleged invisible porosities of the parenchyma of those organs, it is received into the pulmonary veins, and by them conveyed to the left side of the heart. The force propelling the blood throughout this course was considered to be the pulsations of the heart aided by the movements of the thorax and lungs, while the semilunar valves at the mouth of the pulmonary artery intervened to prevent regurgitation.

Such appears to have been already the doctrine of Galen, as Harvey himself points out; and, so far as it went, it was a fair outline of the pulmonary half of the circulation. Nay, Galen even further taught, as Harvey again shows, that the blood received from the lungs into the left side of the heart is sent therefrom into the aorta, to be, by its subdivisions, the arteries, distributed throughout the body by a mechanism similar to that by which, as just mentioned, the blood is sent from the right side of the heart into the pulmonary artery, to be by its ramifications transmitted to the lungs. That the arteries as well as the veins really contain blood in substance and not air, as was previously supposed, Galen devoted a book to prove.

All this, however, came far short of an enunciation of the complete circuit which the blood makes in its course through the body. In certain writings published in the sixteenth century, statements, it has been alleged, are to be found indicative of a knowledge of the complete circulation of the blood through the body in anticipation of Harvey; but the statements referred to do not really comprise anything more than a repetition of the doctrine which Galen already professed in the second century touching the course of the blood through the lungs to the left ventricle, and its passage therefrom into the arteries; whilst the account given of the mode of distribution of the blood through the system generally is erroneous and inconsistent.

The course of the blood through the lungs from the right to the left side of the heart was a subject of disquisition chiefly in connexion with speculations concerning the production of the supposed vital spirits, which, it was alleged, took place in the heart, as in a laboratory, on the return of the blood from the lungs after being there freed from impurities and mixed with air in respiration. But such speculations I need not here stop to notice.

The mode of distribution of the blood in the body was thus still not only imperfectly understood, but the opinions which prevailed in regard to it were vitiated by error and inconsistency. Dr. William Harvey, in the early part of the seventeenth century, zealously applied himself by original observation and experiment to the task of investigating the subject fundamentally—an inquiry which resulted in the establishment of the grand principles, that the blood flows continuously in a circuit through the whole body, the force propelling it in this unwearied round being the rhythmical contractions of the muscular walls of the heart; that a portion only of the blood is expended in nutrition each time that it circulates; and that the blood conveyed in the systemic arteries communicates heat as well as nourishment throughout the body, instead of exerting a cooling influence, as was vulgarly supposed.

Well acquainted in the first place with the anatomy of the heart and bloodvessels, Harvey perceived, as, indeed, others had done before him, though not with the same scientific instinct and appreciation, by contemplating the disposition of the valves of the veins, the valves in the heart, and the valves at the origin of the pulmonary artery from the right ventricle and at the origin of the aorta from the left ventricle, that the blood could flow in one particular direction only—viz., in the veins from branches to trunk, in the heart from auricles to ventricles, from the heart from ventricles to arteries, and in the arteries from trunk to branches.

Whilst his comprehensive acquaintance with the anatomy of the vascular system taught Harvey to infer thus much of the course of the blood, his acute observation and persevering study of the phenomena disclosed by experiments on living animals confirmed it. "On first beholding those phenomena," says Harvey, "I almost came to the opinion with Fracastorius, that the movements of the heart were known only to God, for I could not well make out how systole and diastole take place, nor when or where, on account of the celerity with which these movements succeed each other. I, therefore, did not wonder that the movements of the heart had been likened by Aristotle to the flux and reflux of the sea of Euripus between Attica and Eubœa. At length," continues Harvey, "after numerous and repeated observations, I fancied that I had hit the mark, and succeeded in extricating my mind from the maze in which it was involved, and at the same time to have discovered what I was looking for—viz., the mechanism and function of the heart and arteries."

Harvey ascertained that the two auricles contract at one and the same time, and that then the two ventricles contract in concert, whilst by experiment he proved that the blood is propelled by the contraction of the auricles into the ventricles, and not sucked in, as air is into a pair of bellows, by virtue of an alleged active dilatation of their cavity. He showed, on the contrary, that diastole or dilatation is the state of relaxation, and that systole or contraction is the active state of the heart. He satisfied himself also that, contrary to the vulgar notion, the arteries do not possess any pulsific faculty of their own by which they become actively dilated, so as to be distended by drawing blood into their cavity by suction; but that, on the contrary, they are distended with blood propelled into them from the heart by the systole or contraction of the ventricles. It is, Harvey maintained, the sudden distension of the arteries with the blood thus propelled into them at each stroke of the ventricles which is felt at the pulse.

Here let me make a digression in order to vindicate Harvey's honour. I have referred to the unfounded character of the allegations that in the works of Servetus, Columbus, and Cæsalpinus an acquaintance is manifested with the complete circulation of the blood through the body, in anticipation of Harvey's grand discovery. Anticipation of Harvey has also been claimed for Paulo Sarpi, the celebrated Servite friar of Venice. Nay, worse than this, it was even insinuated that Harvey had actually appropriated the ideas of Sarpi, a knowledge of which he was alleged to have derived from Fabricius Abaquapendente, or directly from Sarpi himself. Father Paulo Sarpi did not make the claim I speak of, much less give utterance to the unworthy insinuation. The claim was got up after his death in 1623, and in this manner. About the time (1616) when Harvey appears to have first lectured on the circulation of the blood at the College of Physicians, he gave a pamphlet on the subject (probably a syllabus of his lectures) to the Venetian ambassador, who was about to leave London on his return to Venice. This pamphlet the ambassador gave to Father Paulo, who, from his early scientific studies, was likely to take an interest in the subject. Paulo accordingly appears to have read it with care, and made notes upon it. These notes, being found among Paulo's papers in the library of the Servites after his death,

were assumed as a proof that the Father was the original author of the discovery of the circulation of the blood. It may be asked, however, Did those who made the claim really know what it meant? Did they know that the discovery of the circulation of the blood through the whole system by Harvey was the outcome of anatomical and physiological observation and experiment, carried on for many years with earnest labour and devoted perseverance, with a view, let me insist, to the advancement of medical knowledge? They knew that Father Paulo Sarpi never carried on such a system of research. He had indeed, at one time, not only studied optics with Baptista Porta in Naples and astronomy with Galileo in Florence, but had also studied anatomy at Padua with Fabricius Abaquapendente (Harvey's teacher also), and knew well about the valves of the veins, which had been, it appears, originally discovered by Jacobus Silvius, but to the special investigation of the anatomy of which Fabricius had given much attention, in conjunction, it is said, with Paulo Sarpi. Fabricius, however, failed to comprehend the full physiological import of the valves; and there is nothing to show that Sarpi ever went any further in a knowledge of the subject.

At the time when Harvey, after having graduated at Padua, was in London labouring industriously to trace out, by an inductive method from observation and experiment, the course of the blood through the body, Father Paulo was, and had long been, very differently employed in Venice. He was Chief Counsellor of State for Affairs Ecclesiastical, and during the time of the Papal Interdict against the Venetians from 1606 to 1607, it became his duty to draw up the letters and rescripts which passed between the Seigniory and the Court of Rome in that crisis. And so successfully did Father Paulo vindicate the rights and honour of the Republic of Venice that attempts were made by the Papal party to assassinate him. One attempt in particular, which was made on the evening of the 5th of October, 1607 (exactly 272 years ago) nearly proved successful. To attend on the wounded Father, Fabricius Abaquapendente and Adrian Spigelius (whose name you know as well as that of Fabricius) were called in from Padua and received injunctions not to quit their illustrious patient until they were assured he was out of danger. On Father Paulo's recovery, the Seigniory of Venice created Fabricius a chevalier, and presented him with a rich gold chain and medal in recognition of his professional services to so esteemed a state dignitary as Father Paulo. Permit me further to mention, as a part of this episode, that during Paulo's illness, my ancestral kinsman, the Rev. William Bedell, preacher at St. Mary's Church, Bury St. Edmunds, in Suffolk, but who was at the time resident in Venice as chaplain to the English Embassy, and who was afterwards Bishop of Kilmore, in Ireland, where he perished in the rebellion of 1641, was among the few persons so trusted by the Seigniory as to be permitted to visit Father Paulo, with whom he had contracted an intimate friendship. Here is a photograph from a painting of Father Paulo Sarpi, preserved in Venice, in which you will observe two scars, one in front of the right ear, and the other between the nose and the cheek. These were the remains of one stab transfixing the cheek from behind, and in which the dagger was left sticking by the bravo, who thus with base courage endeavoured to carry into effect a still baser mission.

To return. Harvey, we have seen, maintained that it is the force of the heart's systole or rhythmical muscular contraction alone which propels the blood into the arteries, and through them on into the veins and back again to the heart. On the other hand, he denied that the arteries are endowed with any innate pulsific faculty, and maintained that their pulse is owing solely to the sudden distension of their walls by the blood driven into their cavity at each systole or contraction of the ventricles. The remission which succeeds the pulse occasioned by this distension of the arteries Harvey contended to be owing simply to collapse of the walls of those vessels from elastic reaction, and not at all the effect of active contraction like that of the heart.

Though Harvey makes use of the expression "pulse of the heart" for systole or contraction of the ventricles, and the expression "pulse of the arteries" for their mechanical distension with the blood driven into them by the said systole or contraction of the ventricles, he did not confound the nature of these two very different, though simultaneous, actions. He took care to point out that the pulse or beat of the heart is simply the impulse which the ventricles, at the time of their systole or contraction, when the heart becomes as it were erected, make against the left wall of the thorax; whereas the pulse of the arteries is, as he contended so strenuously, owing to the simultaneous distension of their walls with the blood propelled into their cavity from the heart by the systole or contraction of the ventricles, and not at all owing, as was commonly supposed, to a pulsific action or active dilatation.

The exposition of the nature of the pulse of arteries thus given by Harvey has been ignorantly charged against him as a mistake. Even his biographers and eulogists, the editors of his "Opera Omnia," published by the College of Physicians in 1766, lament Harvey's supposed error in regard to this point, saying: "We, indeed, wonder that the man who explained the systole and diastole of the heart with so much success that nothing more clear and exact could be said of their use, should have considered that the arterial pulse is not owing to any innate pulsific faculty of the arteries, nor one transmitted to them from the heart, but should have attributed the pulse exclusively to the distension of those vessels by the mass of blood impelled into them by the stroke of the ventricles."

Harvey was, however, in all that he said on the subject, in the main correct, and his censors wrong, but it is necessary here to enter into a little explanation. The circularly disposed muscular fibres of the middle coat of arteries are not endowed with rhythmical contractility. They are tonically contractile, and by their action in variable degrees as regards occurrence, persistence, and amount, cause corresponding variations in the width of the vessel. Besides this tonic muscular contractility, the walls of arteries possess physical elasticity, so that the remission which succeeds each beat of the pulse felt at the time of their distension is due partly to the continuous vital contraction of their muscular coat, and partly to the reaction of the physical elasticity which their walls possess in addition, the two forces, vital and physical, operating in concert with each other.

The muscular coat of the arteries, of which, it is to be remembered, Harvey knew nothing, I may observe, is proportionally stronger in the smaller arteries than in the larger of those vessels, so that the smaller arteries are subject to correspondingly greater variations in width. These variations in width of the smaller arteries exert an important influence on the flow of blood in the extreme vessels, to the consideration of which I shall come in the next part of my lecture. But on the present occasion certain constrictions and dilatations of arteries, in frequent but irregular succession, may be referred to. Of these a remarkable example, visible to the naked eye, presents itself in the large artery of the rabbit's ear. By the dilatation of the artery freer scope is given to the flow of blood, so that the ear becomes red and warm at the time, but by the ensuing constriction the flow of blood is impeded, or even altogether arrested, so that the ear becomes blanched and cold.

I originally referred to the constrictions of the artery of the rabbit's ear, in conjunction with the similar constrictions of minute arteries observable under the microscope in the frog's web and the bat's wing, in my paper on the discovery of the rhythmical contractions of the veins of the bat's wing, published in the *Philosophical Transactions* in 1852. I had observed that when constriction of an artery takes place in the web of the frog or wing of the bat, the flow of blood becomes actually retrograde, owing to the constriction of the artery being regressive from the branches towards the trunk. And this is what also takes place in the rabbit's ear when it becomes blanched and cold. On an unintelligent study of the constrictions and dilatations of the artery of the rabbit's ear, the erroneous notion has been taken up that the vessel in question serves as an auxiliary heart to propel the blood onwards in its course. A contemplation of the phenomena and a little reflection will, however, satisfy you that the progress of the blood is as much impeded by the contractions as it is promoted by the dilatations of the artery. The notion I refer to was first advanced by Dr. Schiff after reading my paper on the veins of the bat's wing, in which I refer in a note to the artery of the rabbit's ear. On its fallacy I commented in my treatise on Failure of Sight from Injuries of the Head and Spine, and I mention the notion now only to warn you against it, seeing that, though so absurd, it has been accepted by certain eminent professors who ought to have known better, and crept into text-books on physiology. One of the professors I refer to is the distinguished Virchow. From this chair I have to express the hope that, as the point in question is of fundamental physiological importance, Professor Virchow will re-examine the

facts and see reason to withdraw the sanction of his illustrious name from so serious an error.

Professor Virchow, when at Wurzburg in 1850 or 1851, had the opportunity, I have been told, of studying my essay "On the State of the Blood and the Bloodvessels in Inflammation" in the number of Guy's Hospital Reports for October, 1850, which I sent by Professor Kölliker to Professor Henle, of Göttingen. Professor Virchow read, I have no doubt, the conditions therein described under which blood-corpuscles, both white and red, appear outside vessels in an inflamed part, but which his former colleague, Professor Cohnheim, has so ill-observed as regards the sequence of events, and erroneously misinterpreted.

One most important link in the chain of his great demonstration Harvey found himself unable to supply anatomically, and that was the real nature of the channels by which the blood passes from the extreme arterial ramifications into the radicles of the veins. He denied the existence of any inosculations between arteries and veins large enough to be seen by the naked eye, but that the blood does pass in some way from arteries to veins he sufficiently proved physiologically. On account of the minuteness of the structure he could not see the passages, and as he could not see them he very properly refrained from any attempt to define them further than by the designation of "invisible pores of the flesh," and suchlike indefinite expressions. He, indeed, two or three times, makes use of the word "capillary," but not at all in reference to the vessels which we now conventionally name *capillaries*, of which, let me repeat, Harvey knew absolutely nothing, as is evident *passim* from the context in his work.

Marcello Malpighi, in his second epistle, "De Pulmonibus," to Borelli of Pisa, dated Bologna, 1661 (that is, three years after Harvey's death), describes and delineates a network of tubules, and the blood moving in them in continuous stream from the minute arteries to the venous radicles, as observed by him in the lungs of the frog with magnifying-glasses so mounted in a frame that the object could be viewed by transmitted light.

If our great anatomist and physiologist had seen what Malpighi was thus the first to see, he would have been able to describe the phenomena, but to do which he never attempted. To seek to make it appear, therefore, as has lately been done, that Harvey did know by ocular observation of the existence of minute vessels intermediate between the last ramifications of the arteries and radicles of the veins is not doing him either justice or honour, for it is tantamount to saying that Harvey was incapable of describing what he had seen, inasmuch as he nowhere gives a description applicable to capillary vessels, much less to the streams of blood in them.

Harvey had a "perspicillum ad res minimas discernendas"—that is, a magnifying-glass (it does not appear, however, of what power),—with which, he tells us, he was able himself to see and also to exhibit to his friends the pulsating heart (as he correctly calls it, instead of the homologically mistaken modern name of "dorsal vessel") of insects and small transparent crustacea, such as the shrimp. Had it occurred to him to view with this "perspicillum" of his the web of the frog's foot or the tail-fin of a small fish spread out on a pane of glass against the light, he would probably have here, again, succeeded in extricating his mind from a labyrinth, and at the same time discovered what he was so anxiously looking for.

The last ramifications of the arteries in the lungs of the frog or water-newt, let me stop to observe, suddenly subdivide into numerous capillaries which form a very close network. From this network, on the other hand, the venous radicles are with equal suddenness formed by a junction of the capillaries. The extreme ramifications of the arteries and radicles of the veins, with the intermediate close capillary network, are represented in this drawing of the lung of the water-newt which I made from the life. I may here also observe that Malpighi's figure is sufficiently correct to show that he had seen what he describes.

The flow of the blood from the extreme ramifications of the arteries through the capillary network into the venous radicles, as seen in the thin transparent parts of living animals, such as the web of a frog's foot, the caudal fin of small fishes, or the bat's wing, under the microscope, is a spectacle which strikes with admiration every beholder, even though he may have no special interest in the mechanism of the circulation such as Harvey had. Leuwenhoek, the Dutch naturalist, at the end of the seventeenth century, in expressing his admiration of the phenomenon of the flow of blood in the vessels of the tail-fin of a small eel disposed under one of his simple microscopes, the lens of which was merely a bead of glass which he had himself fused into shape, says:—"Unwilling to reserve to myself alone so beautiful a sight, I invited several very grave gentlemen to come and see it—amongst others, the celebrated physicist Christian Huygens. These gentlemen," Leuwenhoek continues, "as they looked on it, repeatedly exclaimed that they did not believe anything more curious could meet the eye."

Considering the earnestness with which Harvey laboured to make out the mechanism of the passage of the blood from the extreme arterial ramifications to venous radicles, we may conceive the satisfaction and delight with which he would have contemplated the phenomenon in question had he lived and been one of the party of grave gentlemen invited by Leuwenhoek to see it. A mere glimpse would have sufficed to impart to his mind, already prepared for its appreciation, a flood of light in elucidation of what is confessedly the incomplete part of his demonstration. If Harvey had, indeed, had the good fortune to see under the microscope the flow of blood from the arteries to the veins through the capillaries, he would, I am sure, have leaped for joy, as Father Paulo Sarpi, an equally grave and reverend seignior, did; as Bishop Bedell, to whom I have before referred, used to relate, when on one occasion he explained to the Father the true meaning of a passage in the Greek New Testament which had long been puzzling him much.

Harvey spared no pains in searching out facts by observation and experiment. The facts when found he held closely to, and was scrupulous as to the logical character of the inductions he drew from them.

> Thus did he seek for truth in Truth's own book—
> Creation—which by God himself was writ;
> And wisely thought 'twas fit
> Not to read Comments only upon it,
> But on th' Original itself to look.

This sagacity was wholly Harvey's own. He owed nothing to his contemporary, Lord Bacon. His investigations had been made and his discovery publicly announced in his lectures before the appearance of the Novum Organon. The Novum Organon, indeed, Harvey rather contemptuously said was well enough for a Lord Chancellor. Disagreeing, of course, in this covert censure, supposing it ever to have been uttered, we may still pronounce Harvey's "Exercitatio Anatomica de Motu Cordis et Sanguinis" as being, in fact, a "Novum Organon" itself practically exemplified.

(To be concluded.)

Clinical Lecture
ON
DISEASE OF THE SHOULDER-JOINT.

WITH REPORTS OF TWO CASES IN WHICH THE HEAD OF THE HUMERUS WAS EXCISED.

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THE rarity of inflammatory diseases of the shoulder-joint, as compared with the large joints of the lower extremity, and with the elbow and wrist, is very marked, and somewhat remarkable. Out of 140 cases collected by M. Crocq,[1] 43 were of the hip-joint, 23 of the knee, 10 of the elbow, 10 of the wrist, and only 3 of the shoulder. Of 368 cases[2] of joint disease which have come under treatment in the Middlesex Hospital during the five years 1874-78 inclusive, I find 130 were of the hip, 160 of the knee, 25 of the ankle, 35 of the elbow, 12 of the wrist, and 6 of the shoulder.

The explanation of this great comparative immunity of the shoulder from disease is not, in my opinion, to be sought, as has been suggested, in the smaller size of the synovial

[1] Des Tumeurs blanches des Articulations.
[2] Cases of simple traumatic synovitis, and of chronic rheumatic arthritis, are not included in this number.

capsule, nor in the more scanty blood-supply to the joint-tissues, but, I think, in the greater simplicity of construction of the scapulo-humeral articulation. In the hip- and knee-joints there are inter-articular ligaments over which the serous lining is reflected, and upon which it is more liable to be bruised; there are, too, large cushions of fat outside the lining membrane which serve as favourable spots for the commencement of inflammatory changes of a low or chronic character. In the elbow and wrist there are similar fatty pads or cushions in connexion with the synovial capsule, and there is the additional complication of more than two bones playing upon one another. But whatever its cause, one consequence of this rarity of disease of the shoulder is the small degree of attention given to it in surgical works, compared with the abundant literature devoted to morbus coxæ and disease of the knee-joint. I propose to-day to say a few words upon the etiology, symptoms, diagnosis, prognosis, and treatment of shoulder-joint disease, and then to give the details of two cases in which excision of the head of the humerus was performed.

Etiology.—Inflammation of the joint may be congenital, or it may occur at any time from within a few days after birth to the fortieth or forty-fifth year. In the cases taken from the Middlesex Hospital registers I find the ages of the patients to be seven, seven, sixteen, twenty-two, twenty-five, and thirty-six years; in the second case reported below, the man's age was forty-three years. It is not often met with in advanced life, when chronic rheumatic arthritis becomes so common. If it occur in infancy or very young life, and runs on to suppuration and anchylosis, its remote effects are very injurious. Besides dwarfing the growth of the humerus and scapula, the clavicle will also be arrested in its development, the chest-wall on the same side will not be able fully to expand, and, as a consequence, the corresponding lung will be interfered with in its development and functions. I lately had under my notice a child two years old, the subject of congenital subspinous dislocation of the shoulder, in whom all these evil effects were evident, and as the child grows older they will, of necessity, become more marked.

The constitutional states and the accidental circumstances which conduce to disease of the shoulder are the same as those which excite it in other joints. The strumous or syphilitic cachexia, gonorrhœal rheumatism, cold, sprains, violent wrenches and contusions, are amongst the commonest causes; it may also follow one of the continued fevers. It may begin in the tissues belonging to the joint itself, or in those surrounding it. Sometimes the point of departure is a circumscribed ulceration of the synovial membrane, or the synovial membrane may be injected in patches, and marbled over by distended vessels; from this condition the inflammation may be propagated to the solid parts of the joint along the periosteum of the articular ends of the bones; then may follow a succession of morbid changes—viz., softening and fibrillar disintegration of the cartilages, osteitis, suppuration and caries or necrosis. In other cases the starting-point is the bone; osteitis of the humerus, for instance, once excited, may pass on to suppuration, caries, or necrosis, and may secondarily set up inflammation of the joint. Lastly, long-standing or intense inflammation of the bursæ, or of some of the other tissues outside the joint, may lead to gelatinous softening, and then to ulceration of the fibrous capsule, and finally to complete destruction of the greater part of the articulation.

Symptoms.—These are pain, tenderness, impaired and painful movements, forced position, swelling, perhaps fluctuation. In the late stages bony crepitation may be detected, especially if the ligaments be relaxed, as well as the articular surfaces eroded. Pain may be of very variable degrees of intensity. It may vary also as regards its situation; sometimes it is fixed deeply at the articulation, sometimes at the point of the shoulder, and sometimes it flies along the inner side of the arm to the elbow, and (as in the corresponding state of things in the lower limb) gives rise to the idea that the affected part is the elbow, not the shoulder-joint. Pressure in front of the shoulder, or in the hollow of the axilla, increases the pain, often very considerably. Movements, sometimes the slightest, of the humerus cause pain so intense that all voluntary motion is either prevented or is effected with the greatest caution. As a consequence of the pain of movement the limb assumes an almost constant position, the shoulder falls, the arm hangs helplessly along the side of the trunk, the elbow is bent, and the forearm is held in front of the chest. Swelling may not be detected at the outset owing to the thickness of the deltoid which overhangs the capsule; but in other cases a little swelling below the clavicle, or the junction of the spine of the scapula with the acromion, is evident in quite the early stages of the disease. In the more advanced stages the effusion into the joint and the alteration in the surrounding tissues destroy more or less the ordinary configuration of the shoulder. When suppuration occurs it is attended with increased tumefaction, and the superficial parts become œdematous, and of a red or livid hue. Instead of swelling, there is, in some instances, a flattening of the outline, and an actual diminution in the volume of the joint, due to a wasting of the muscles which cover or surround it, though subsequently serous effusion, or suppuration with its attendant tumefaction, may occur.

As a result of abscesses around, or suppuration in the joint, especially if associated with disease of bone, intractable fistulæ may be established, and the shoulder may become flattened in appearance from before backwards. Thus *diminution* in the size of the joint may occur, soon after the commencement of the disease as a result of muscular atrophy, or in the later stages as the result of prolonged discharge, and the wasting which follows it. *Lengthening* or *shortening* of the limb, as in morbus coxæ, may be either real or apparent, considerable or slight. Apparent lengthening and real shortening are the two most important and the commonest changes. Apparent lengthening is due to dropping of the shoulder owing to fatigue of the elevators of the scapula and clavicle. Real lengthening I have seen produced by the dragging of the arm away from the glenoid fossa of the scapula owing to fatigue or injury of the deltoid; the normal interval between the acromion process and the head of the humerus was increased as long as the arm hung vertically by the side, but this was at once corrected as soon as any movement of the arm was attempted. Real shortening indicates the partial or entire destruction of the head of the humerus or its spontaneous dislocation. In comparing the length of the diseased with that of the sound arm, the two limbs should be placed in exactly similar positions, and the measurement made from the tip of the acromion to the external condyle of the humerus.

Diagnosis.—It is not always easy to diagnose disease of the shoulder-joint. Some diseases which simulate it may likewise excite it; such are osteitis of the shaft or superior epiphysis of the humerus, inflammation at the line of ossification between the diaphysis and epiphysis, necrosis, and deep-seated inflammation of the tissues surrounding the joint.

In 1873 I was consulted by a middle-aged healthy farmer for long-standing disease about the right shoulder, the result of a blow six years before. Abscesses had formed and were left in the axilla, on the outer side of the arm as low down as six inches from the joint, and over the back of the scapula. He was considered to be suffering from disease of the articulation, and had been advised to have the head of the humerus excised. I satisfied myself that the joint structures were not involved, and that the sinuses, though extensive, were due to suppuration in the tissues surrounding the joint. He got quite well by means of injections, setons, and rest to the muscles about the shoulder, but at the sacrifice of much of the abduction movement of the arm and with much wasting of the deltoid muscle. He came to see me again in June of this year, when he told me that since 1873 he had occasionally had an abscess on the arm and one or two in the armpit, but not one since Christmas, 1877. There had been for the last two or three days a little inflammation and discharge from the spot where the last abscess broke—viz., near the posterior fold of the axilla. He uses his arm for all purposes well, and with the aid of his scapular movements he can raise his extended arm and forearm to the level of the shoulder, and with his fingers can touch the ear of the same side without inclining his head to the shoulder. This result, considering the long-standing and extensive range of the disease, must be regarded as very good, but it shows how, even in its consequences, suppuration in the surrounding tissues may simulate suppuration in the joint itself.

I have quite recently seen a patient suffering from acute osteitis of the upper end of the humerus, who, during the earlier stages of the attack, had many of the symptoms of disease of the shoulder-joint, for which, indeed, it was at first mistaken.

Other affections there are which present one or more of the symptoms of joint disease, but do not ever terminate in, or excite, it. Such are neuralgia and neuritis of the cords

of the brachial plexus; and idiopathic contraction of the muscles around, or the capsule of the joint. Persons past the middle period of life often apply for advice, thinking they have disease of the shoulder following an injury. There is pain more or less severe, impaired movement, and flattening of the shoulder. In these cases there has usually been some laceration of the fibres of the deltoid, or some injury to the circumflex nerve leading to palsy of that muscle. Contraction of the lower portion of the capsule sometimes follows the long-continued retention of the arm to the side of the body, which is usually the easiest and most restful position in disease and after injury. Such cases of simple contraction of capsule are best treated by forcible, but careful, movement under chloroform, so as to break down the adhesions or contractions. A woman came to me at the out-patient department several months ago with inability to raise her arm, or even to remove it from the chest wall—i.e., to abduct it. She had fallen with her arm outstretched, and, as every movement of the limb for a time was attended by pain, she kept her forearm in a sling. Upon discarding the sling she found the shoulder almost fixed, and attempts to raise the elbow from the side caused more pain than ever. What, no doubt, had happened in her case was this: by the fall she had strained the under part of the capsular ligament, or the tendon of the subscapularis. Some inflammation was excited, and contraction, favoured by position, followed. Under chloroform the arm was carefully moved forwards and backwards, and abducted till the elbow was brought level with the shoulder. During these proceedings the giving way of fibrous tissue was distinctly heard. Subsequently passive movements were daily exercised, and the joint, though it never quite regained its normal freedom, was restored almost to its natural mobility.

Rupture of the long tendon of the biceps may possibly give rise to the idea of diseased joint. Inflammation of the axillary glands, tumours of the upper end of the humerus, and congenital or long-standing dislocations are usually sufficiently distinct not to be mistaken for articular disease of the shoulder, though such mistakes have been made.

Prognosis.—If disease of the shoulder-joint be treated from the outset both locally and generally on the same principles which guide us in the treatment of other joints; and if, when the acute stages have passed, well-directed efforts be made to prevent contractions or adhesions of the soft structures of the joint, a good recovery, with excellent movement, may be looked for in some cases. More often there will be partial fibrous anchylosis; but anchylosis of the shoulder is of less serious consequence than anchylosis of the elbow or wrist, because the loss of movements of the shoulder-joint is to a considerable extent compensated for by the free mobility of the scapula. A joint which has once been the seat of inflammation and subsequent anchylosis is very prone to take on an unhealthy action if at any future time it be injured, or if the constitutional power of the individual becomes impaired. The history of the two following cases proves this. If, whether as a part of the original disease or as a result of a subsequent attack upon a previously affected joint, the articular surfaces be eroded; if the bone become carious or necrosed; if the fibrous tissues soften, the synovial membrane degenerate, ulcerate, and suppurate; if sinuses burrow and open externally, and the muscles be soaked in the discharges, then the patient, especially if advanced in years or of an unsound constitution, will pass into a cachectic condition, and under these circumstances the only chance of recovery lies in amputation of the limb or resection of the joint. The advantages of resection over amputation are of course obvious. Amputation is easily performed, and by it all the diseased tissues are at once removed, so that nature is saved a work of elimination and restoration which resection often exacts from her, much to the trial of the patient's remaining powers and to the delay of complete recovery. After the most satisfactory excision, however, the movements of the limb will seldom be more free than those which are permitted after recovery from disease with anchylosis, or than where a false joint has been formed in cases of long-standing unreduced dislocation. Still, such an arm is far superior to the most ingeniously constructed artificial limb, because the forearm, the wrist, and the fingers are able as deftly as ever to obey the dictates of the patient's will, and the greater part of the power exercised by the large muscles which pass from the trunk to the humerus is preserved.

The second of the following cases was under my predecessor Mr. Nunn, and with his permission I make use of it. They are very similar in their history, symptoms, and morbid changes.

CASE 1.—John N——, aged thirty-six, a painter, was admitted into Forbes ward on Oct. 14th, 1878. Twenty-three years before, after a game of cricket, he felt stiffness in the right shoulder, and was unable to lift up his arm. He suffered pain in the shoulder-joint, and fancied he had sprained it. After a few months of pain and stiffness, an abscess formed and was opened. For twelve months this continued to discharge through a sinus situated near the insertion of the deltoid. The pain ceased, and the patient regained movement, but not perfect mobility. Some time after the sinus had closed a clear fluid discharged itself, and then the sinus again closed; and so it continued to discharge at intervals till the end of three years, when it closed entirely, and remained sound for nineteen years. No bone at any time came away. Up to Christmas, 1877, he continued to use his arm freely, and then he thinks he caught cold; he felt pain, and a lump formed at the site of the old sinus, which he poulticed until it discharged pus. The matter appeared to burrow far behind the shoulder. Pain was relieved after the pus escaped, and he again went to work. The shoulder gradually became more and more fixed until he was unable to use it, and so he came to the hospital.

On admission, there was almost complete anchylosis of the right shoulder, and around the shoulder, and especially in front, there was considerable thickening. Below the joint, near the insertion of the deltoid, was a discharging sinus, which ran upwards for about an inch and a half in the direction of the joint, but did not conduct to dead bone. Passive movement gave rise to occasional rough creaking, thought to be extra-articular, but movement was not painful unless the head of the bone was at the same time pressed against the glenoid fossa. He is a thin, fragile, weakly-looking man.

On Nov. 7th the patient was examined under chloroform, by Mr. Nunn. The sinus did not seem to lead up to the joint, but the joint was firmly anchylosed. The sinus was slit up, and the shaft of the humerus was found exposed and rough near the insertion of the deltoid. As no sinus could be traced to the joint, it was not deemed desirable to interfere with the articulation.

Jan. 15th, 1879. — There has been no local improvement from the treatment. The limb is fixed and useless, and very painful; fresh sinuses have formed, and the patient's health is rapidly failing from the exhaustion caused by pain and discharges. It was decided, therefore, that the limb should be again examined under chloroform, with a view to excision if the condition of the joint seemed to require it. Mr. Morris explored the sinuses, and, finding the head of the humerus bare, he made a long straight incision through the substance of the deltoid, so as to lay open the joint, and excised the diseased upper end of the humerus; the glenoid fossa was also devoid of articular cartilage, and carious upon the surface, part of which required to be gouged away. The shaft of the humerus below the section made by the saw was partially denuded of periosteum, but was firm, compact, and healthy throughout. The excised head was entirely denuded of articular cartilage, and its compact layer of bone in places destroyed.

The day after the operation the patient was allowed to sit up in bed, and after the sixth day the arm was carried in a sling, and he was allowed to get up and be about the ward. Much pain was suffered for some few weeks at the back of the shoulder, but it quite ceased after an abscess formed and broke in the posterior fold of the axilla.

May 7th.—The arm admits of fair amount of forward and backward movement, and some slight adduction and abduction. The patient can lift a chair with ease, and has all the use of the forearm and hand perfect. There are two small sinuses near one another in the line of the cicatrix, but these discharge only a little thin pus, and do not communicate with dead or bare bone. He suffers absolutely no pain, and has immensely improved in health and general appearance. Constitutionally he is quite well, and is gaining more and more use of his limb every day.

He has since been back to the hospital to report himself well.

CASE 2.—James M'C——, aged forty-three, a museum attendant, was admitted into Forbes Ward on March 4th, 1879. Eighteen years ago, whilst on the Continent, Tyrolese Alpine climbing, he met with an accident, and fell upon his

right shoulder. Suppuration followed, and an abscess formed in front of the anterior axillary fold. This closed after a time, and the patient recovered the perfect use of the shoulder. In May, 1877, he again injured the same shoulder whilst rowing, and the injury was followed by severe pain and swelling with suppuration. An abscess burst in the arm in the following October, and on December, 1877, the old sinus in front of the axilla reopened, and has ever since been discharging. The shoulder-joint has gradually become stiff, and is now almost completely fixed, the movements of which it is apparently capable being in reality scapular. On fixing the scapula, however, a small amount of joint movement could be made out; this, under chloroform, is more free, and is accompanied by grating. There is some general thickening of the parts about the joint, and two sinuses discharged a little pus, one being situated on the chest-wall just over the lower border of the pectoralis major, and the other just below the insertion of the deltoid in the middle of a cicatrix about one inch and a half long. This latter appears to run upwards, for on pressing below the point of the shoulder some pus oozes from the sinus. There is no tenderness and no pain at night, and only slight gnawing pain in the day. He has always enjoyed good health, except for his shoulder-joint affection; he is tall and spare in frame, regular and temperate in habits, and has no consumptive or scrofulous tendency.

March 12th.—The head of the humerus was excised through a straight incision three inches long from the acromion process downwards. A second piece of the humerus was removed, as the medullary cavity in the line of the first section was seen filled with a quantity of pale-yellow, unhealthy-looking marrow, and the cancellous tissue was soft and unusually vascular. A little carious bone was gouged away from the glenoid fossa. On examination of the portions removed, almost the whole articular cartilage, and the compact layer of bone beneath, in many places had disappeared, leaving the cancellous tissue exposed; where the cartilage had not quite disappeared it was readily separated. The cancellous tissue was of a dark purplish-red colour, excessively soft, and gave way readily under pressure. The patient made a good recovery, and on April 15th was discharged well.

The points of similarity in these cases were:—1. In both an old injury was followed by suppuration, and this again by a sinus which remained open for a long time; in one case the injury was twenty-three years before admission into the hospital, in the other eighteen years. 2. In both cases complete recovery seemed established, in one for nineteen years, in the other for sixteen years. 3. In one, disease recurred at Christmas, 1877, after catching cold; in the other case after a second injury in May, 1877. 4. In both pain and suppuration, continuing for very many months, and terminating in anchylosis, led ultimately to the necessity of excision. 5. In both cases, besides other sinuses, there was at the time of admission the opening of a long sinus from which discharge escaped, near the insertion of the deltoid. 6. Finally, the condition of the head of the humerus and of the glenoid fossa was the same in each.

The chief difference between them was the weakly constitution and the much more serious affection of the health of the former patient. Another point connected with the first case, and which gave rise to much difficulty in the diagnosis, was that for a long time the first and only sinus was near the insertion of the deltoid; for it encouraged the opinion that the disease was confined to the shaft of the humerus.

A question which arises in regard to each of these cases is this. Was the disease, in the first place, confined to the surrounding tissues? And was the joint affected, a long time subsequently, from extension of the inflammation, which had been relighted by injury or otherwise in the soft tissues of the neighbourhood, to the joint itself? Another question is, does inflammation of the surrounding tissues, such as existed in the case of the farmer above referred to, predispose to articular disease at a future time? The movements, and therefore the uses, of the joint are diminished, and, as a consequence, the vascularity and nutrition of the parts are impaired; and they are thereby rendered more prone to take on any low chronic form of disease.

You must not conclude from my being able to show you two recent cases of excision of the head of the humerus for disease, that therefore this operation is common. On the contrary, as I have already stated, disease of the scapulo-humeral joint is very rare indeed; and I have looked through the reports for several years of three London hospitals, and find, upon examining the tables of operations, that excision of the shoulder was performed only seven times. As compared, too, with the number of excisions of the hip, knee, and elbow, those of the shoulder are very few, as may be learnt by a glance at the following statement.

At St. Bartholomew's, in the eight years from 1870 to 1878 inclusive, but excluding 1872, which I have not at hand to refer to, there were 7 cases of excision of the hip, of which 2 died, and 1 was unrelieved; 42 of the knee, of which 4 died, and 6 were unrelieved; 1 of ankle, without a death; 2 of shoulder, of which 1 died; 17 of elbow, of which 2 died, and 1 was unrelieved; 2 of wrist, without a death.

At Guy's in the nine years from 1870 to 1878 inclusive there were 75 cases of excision of the hip, of which 9 died; 88 of the knee, of which 10 died; 8 of the ankle, without a death; 1 of the shoulder, without a death; 63 of the elbow, of which 7 died; 2 of the wrist, without a death.

At the Middlesex Hospital, in the ten years from 1867 to 1876 inclusive, there were 25 cases of excision of the hip, with 2 deaths; 9 of the knee with 1 death; 1 of the ankle, without a death; 4 of the shoulder, with 1 death from pyæmia; 21 of the elbow, with 1 death; 3 of the wrist, without a death.

Thus, out of a total of 371 cases of excision, 107 of these were of the hip, with 13 deaths; 139 of the knee, with 15 deaths; 10 of the ankle, without a death; 7 of the shoulder, with 2 deaths; 101 of the elbow, with 10 deaths; 7 of the wrist, without a death.

The mortality after excision of the shoulder is very high. Speaking roughly, it is between two and three times higher than that of the same operation on the hip, knee, or elbow. Thus, from the above figures, the mortality after excision of the hip is 12·1 per cent., of the knee 10·7 per cent., and of the elbow 9·9 per cent., whereas that after excision of the shoulder is 28·5 per cent.

ON

THE DIRECT APPLICATION OF OXYGEN TO ULCERATING SURFACES.

BY R. H. GOOLDEN, M.D., F.R.C.P.,
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I SHOULD be glad to be allowed to ventilate a subject in THE LANCET which will probably be of some interest both from a clinical and physiological point of view—namely, the direct application of oxygen to ulcerating surfaces.

A patient was admitted into St. Thomas's Hospital, who was suffering from sphagenic ulceration of the throat. It was progressing with great rapidity, and in a very few days had destroyed the uvula and the greater portion of the soft palate. There was no reason to believe that it was the result of syphilis, except the general opinion that that form of ulceration is one of the subsequent stages of the specific disease. There was no secondary eruption, and she denied that she had ever had or been treated for it; but I hazard no opinion on that subject, as it is difficult to rely upon any statement of a hospital patient in such a case. What was left of the palate was of a bright crimson colour, with elevated edges, discharging some dirty cream-like matter; the breath was very offensive, and she could neither speak intelligibly nor swallow liquid, which regurgitated through the nose.

The usual treatment in such cases is, I believe, the inhalation of the fumes of oxide of mercury given off from hot iron. Now it had often struck me that there must be some reason why such mercurial fumes should be so generally efficacious, and at the same time all forms of mercury taken into the stomach or through the skin are known to aggravate the process. Also that it is necessary to heat the iron upon which the oxide of mercury is thrown to a very high temperature to get any fumes at all, and even that protoxide of mercury, the black powder, when heated to an ordinary red

heat and exposed to the atmosphere, absorbs oxygen and becomes peroxide, yielding no fumes, but when raised to a white heat or to the boiling point of mercury, it dissipates and gives off a white smoke. Now it is clear that no patient could inhale anything at so high a temperature, and that it must necessarily be allowed somewhat to cool before it could be attempted. This is what virtually occurs in the inhaler. The mercury is given off in vapour with its oxygen, but they are decomposed. The mercurial fumes do not rise with the oxygen, but fall as crude mercury as soon as the boiling-point is not sustained, and fall back as crude mercury, or partly oxide, whilst the free oxygen pursues its way through the inhaling tube and is inspired. Under this idea I made the patient inhale pure oxygen, made in the laboratory, in the usual way, from peroxide of manganese and chlorate of potassa, with the satisfactory result of arresting the destructive process. Though the greater part of the soft palate and uvula no longer existed, and speech was unintelligible, and fluid passed through the nose instead of downwards, that which was left soon assumed a healthy character and healed, and within two weeks some part of the palate was operated on, and a metallic plate supplied, and she was discharged in as satisfactory a condition, both as to swallowing and speaking, as could be hoped for after the destruction of the parts to so large an extent.

I had an opportunity of trying the same plan soon afterwards, with exactly the same effect. There was some inconvenience in the use of the laboratory gasometer, as the patient could not be prevented from exhaling the gas into the gasometer after the inspiration, and it was naturally objected to. So I procured two large bags, to each of which there were attached two openings—the one for introducing the oxygen from the gasometer, and the other for inhalation. To the latter two stop-cocks were attached, and a glass mouth-piece, with a valve, which allowed the free inspiration from the bag, but the expired gas was prevented from being returned into it, so that I had always at command a quantity of pure oxygen for respiration. The glass tubes were easily removed and washed.

There were some considerable advantages in this plan. I got rid of the use of mercury altogether, and could continue the use of the oxygen at pleasure, knowing that the patient really did inspire it; for I believe that as soon as the hot iron plate became cool, which it was sure to do in a few minutes, there would be no inhalation of the fumes, as they would cease, and no oxygen produced for inhalation, but the patient would merely breathe common air rather warmer than the atmosphere. In any general or lock hospital this plan is fraught with no difficulty; but in private practice the machinery would be too cumbersome, and any other plan is costly. An engineer, who used to supply the oxygen water, sold compressed oxygen in iron bottles, but the bottles, to contain any serviceable amount, were necessarily so heavy that they were not easily carried about, and weighed nearly 1 cwt.

Oxygen may be prepared without heat by mixing permanganate of potassa and binoxide of hydrogen, but the latter material is not everywhere easily obtained, and is spontaneously decomposed by a high temperature, such as we often get on a hot summer's day in England, and drives out the cork or bursts the bottle, and must be kept in a cool and dark place. I believe it is used mostly by hairdressers for producing the light-yellow colour in hair, which was very fashionable a few years ago. An apparatus was invented by a chemist in Oxford-street for generating this gas for inspiration, and there the binoxide of hydrogen was sold. I have used it for sanitary purposes—for purifying water for drinking, especially at the time of the last cholera epidemic in London. The suspected water was treated with a very weak solution of permanganate of lime, which I believe to be Condy's ozone water, in very small quantities, until the impure water showed a colouring of the salt, when all organic matter was destroyed; then a few drops of the peroxide of hydrogen precipitated the lime and manganese, and left the water colourless, pure, and drinkable. The water supplied by the water company at that time, although it had been passed through Lipscome's filter, and was perfectly clear, still contained some organic impurities, as evidenced by the addition of the permanganate, and being allowed to stand for an hour. A few drops were quite sufficient, and then a few drops of peroxide of hydrogen were added. Insoluble lime and protoxide of manganese precipitated, and separated by pouring off the water for use.

Sussex-gardens.

REMARKS ON CELLULITIS OF THE NECK
(ANGINA LUDOVICI).

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(Concluded from p. 572.)

IT was reserved for the late Dr. Ludwig, of Stuttgart, to first accurately describe the most severe form of this inflammation—the idiopathic. His original paper appeared at Stuttgart in the *Medicinisches Intelligenz-Blatt*, No. 4, Feb. 1836. This was followed by a series of other cases by different authors, which, while they added nothing of very material importance to Dr. Ludwig's description, tended to confirm his views, and to support his opinion that it ought to be considered and classed as a separate and distinct disease.[1] The subject is one of interest and importance. I shall give a brief outline of Dr. Ludwig's original paper and of the others which it called forth.

Dr. Ludwig thus described "the new kind of inflammation of the cellular tissue of the neck":—Along with symptoms which precede a rheumatic, or rather an erysipelatous, angina—viz., slight fever with repeated rigors, dragging headaches, depression, loss of appetite, coated tongue, and some difficulty in swallowing, which at first is very slight, or which may be entirely absent,—there develops, sometimes on both sides, more generally on one side, of the neck a hard swelling, commonly in the tissue which surrounds the submaxillary gland, more rarely in that which surrounds the sublingual or parotid. This cellular induration spreads, and similarly affects all the cellular tissue which it involves, spreading at first towards the chin, even to the opposite side, then downwards towards the larynx, and backwards towards the parotid, at the same time that it swells considerably. It involves in like manner all the intermuscular planes, and the muscles themselves between the mouth and the hyoid bone. The tongue rests on a floor of hardened tissue, deeply congested, which becomes more especially prominent and like a bolster in the mouth, just inside the symphysis of the lower jaw. The power of opening the mouth is much curtailed, and attempts to do so are painful. The tongue thus rests upon a floor which is indurated and reddened, and it is pushed upwards and backwards; the movements of the jaw and the power of swallowing and speaking are materially interfered with. During the course of these local manifestations (the first four or six days) the general health does not seem to be much affected: the fever is moderate, and the strength but slightly altered. Neither appetite nor sleep is entirely wanting; the thirst is slight, and both secretions and excretions are regular. During the further course of the disease the skin over the tumour begins to get red, particularly in places; and, if it have not previously occurred, in the interior of the mouth there appear deposits of phlogistic lymph; the swelling under the tongue becomes softer, as though serum had been poured out beneath the mucous membrane and had partially coagulated. On the exterior, too, parts have become locally softened and pit on pressure, and to the finger now give the feeling of crepitation (from the development of gas); elsewhere a more distinct feeling of fluctuation is perceived, as if here and there it might come to active suppuration; this, however, does not actually take place, for the process either stands still or it recedes. Then, in the further course of these manifestations, a spot softens at the side of the tongue within the mouth or along the margin of the lower jaw, and from it there is discharged a thin stinking fluid, of a grey or reddish-brown colour, which soon more and more assumes the appearance of ichor from a sloughing process. As soon as this breaking-down process sets in, or even just before (that the process is one of true gangrene, and of an exceedingly asthenic type, there can be but little doubt), symptoms of general constitutional implication quickly show themselves. The fever increases, with morning exacerbations (as a rule); sleep becomes broken; the urine deposits freely; profuse sweatings set in, disagreeable dreams, startings in the sleep, and slight

[1] Abstracts of these papers will be found in Schmidt's Jahrbuch for 1837. I must acknowledge my indebtedness to this publication for the references which enabled me to consult the original papers.

delirium. The tension in the neck and in the inflamed parts around increases (which may falsely suggest a commencing resolution and improvement); the swallowing remains difficult, in consequence of which the patients try to depress the jaw; then attacks of dyspnœa come on, generally in paroxysms, with intervals of comparative quiet; these increase, although the tension of the neck decreases, and they probably indicate that a real affection of the nervous system, rather than a mechanical narrowing of the respiratory passages, or perhaps effusion into the chest, is the cause of them. The symptoms follow on each other with amazing rapidity, and are characteristic of a putrid typhoid process; death from coma, with lung paralysis, taking place in four or five days, being the tenth to twelfth day from the commencement.

In these cases, when an autopsy was allowed, the skin and the connective tissue immediately beneath it were not altered, and were not adherent to the indurated part, but rather separated from it by a quantity of serum. On the other hand, the connective tissue beneath the platysma, and in all its planes about the cervical and salivary glands and between the depressors of the jaw, was gangrenous, of a blackish-grey colour, scarcely coherent, filled with air-globules, and infiltrated with greenish or greyish-brown ichor. In places here and there were small abscess cavities, the walls of which were lined with gangrenous and half-destroyed muscle, and containing a quantity of stinking pus something like yeast, mixed with blood. Almost all the muscles, especially the deeper ones, appeared to be altered, darker than natural, and dirty-red coloured, almost like dark liver-substance. The salivary glands, in so far as they were involved in the swelling, were sometimes redder, sometimes not altered. In some autopsies there was less of this putrid decomposition and more induration of the individual parts. In one of the most marked cases the periosteum on the interior of the inferior maxilla, corresponding to the place where the discharge first showed itself, was detached, leaving the bone bare and discoloured. The mucous membrane of the mouth, of the tongue, of the pharynx, and of the air-passages, was sometimes reddened, sometimes not; in the latter there was a large quantity of whitish, rarely of reddish, mucus. The vagus and recurrent nerves were discoloured, not only as regards their neurilemma, but also, as it seemed, in their substance. The chest and head were not opened.

His treatment consisted in local and general bloodletting, local emollient applications and gargles, and mercurial inunctions.

As regards the etiology, Dr. Ludwig believed that an erysipelatous process was at the bottom of it, "which, either on account of epidemic influences or in consequence of some peculiar condition of the patient, was prevented from getting to the surface, and which then determined to deeper parts, heterogeneous to its nature; hence this gangrenous inflammatory condition of the cellular tissue was brought about. Or it might be due to conditions proceeding from the nervous system as the former (epidemic influence) developed itself, so that the disease derived its tendency to gangrenous inflammation from the erysipelatous factor, as in malignant carbuncle, and its tendency to induration and paralysis from the nervous factor, as in malignant parotitis." Dr. Ludwig thinks it differs from angina gangrenosa (which produces such extensive destruction in the mouth and gums, although there is much swelling of the neck) by the absence of all superficial gangrene in the mucous membrane of the mouth, and by the absence (and by the contrast) of œdema on the external swelling; it differs from other symptomatic glandular swellings by the slight affection of (or absence of affection) of these glands, although the intermuscular planes all round are affected; it differs from ordinary erysipelas by the absence of all skin affection, and by the hardness of the cellular tissue. Dr. Ludwig will not pretend to say that this disease never develops out of the other forms, nor that it never runs into them.

His diagnostic points are:—1. The slight inflammation in the throat, which, even when it exists, disappears after a day or two; and which, if it persists, may be looked upon as (secondary) symptomatic. 2. The peculiar wood-like induration of the connective tissue, which will not receive impressions. 3. The hard swelling under the tongue, with a bolster-like swelling around the interior of the lower jaw of deep-red or bluish-red colour. 4. The uniform spread of this induration in such a way that it is always sharply bounded by a border of entirely unaffected cellular tissue. 5. The escape of the glands, although the disease attacks their cellular tissue surroundings, and may even commence in it.

In No. 5 of the same journal (Feb. 13th, 1836), under the title "Carditis serosa letalis," Dr. Hafer relates a case of this disease which presents one or two points of interest. A married lady, aged twenty-three, suckling a child six months old, towards the end of August, had a severe attack of toothache from taking cold. It was attended with swelling of the right cheek; the swelling passed down towards the neck, which was painful on pressure. As the patient had several carious teeth, nothing serious was suspected. The symptoms, however, did not yield to treatment (bloodletting being the chief) but were rather aggravated. Then inflammation of the parotid was diagnosed. The neck was stiff and very painful; it was indurated as low as the clavicles; the skin was shiny and tense, of a reddish-brown colour, and very painful when touched. The pharynx and fauces could not be examined on account of the difficulty of opening the mouth. Swallowing was painful. The disease progressed during the next days. On Sept. 5th, after an attack of coughing, she spat up a quantity of very stinking pus. On Sept. 7th the patient complained of apnœa, and was troubled with cough. Pulse was small, and there was oppression over the heart. The patient went off in a dead faint, which lasted some time. On the following day the pain and oppression in the chest were increased. She died in the evening. The autopsy revealed extensive sloughing of the cellular tissue of the neck, with implication of the muscles. The parotid and submaxillary glands were gangrenous; the skin over the right side of the neck was also gangrenous; a quantity of very fetid ichor discharged itself after death. A communication was also found with the pharynx. The right lung was collapsed in great part, and the pleural cavity filled with a fetid serum in which flocculi were abundantly present. The left lung was undergoing caseous degeneration; its pleural cavity contained a quantity of unaltered serum. The pericardium was adherent to the lungs, and reddened on its exterior aspect; it contained a pint of sero-lymphatic fluid. The surface of the heart was everywhere covered with a layer of granulations, six lines thick.

In No. 10 of the same journal, Dr. Heim, of Ludwigsburg, contributes an interesting historical sketch of the disease, or rather of what he believes to have been the same disease, which occurred in Stuttgart in 1823, and adds another case which had been under his own care. It occurred in a soldier aged thirty-two, and was supposed to have been the result of a cold. The man was admitted into hospital on account of induration of the side of the neck, which commenced in the neighbourhood of the submaxillary gland. The skin was hardly reddened. The mouth could not be opened without great difficulty and pain, but, as far as could be seen, there were neither sores nor redness visible inside the mouth. There was difficulty in swallowing from the first. The case progressed as Dr. Ludwig described, and ended fatally on about the fifteenth day of the disease. The post-mortem showed in this case that the mucous lining of the trachea was discoloured—of "a darkish colour, as though gangrenously inflamed" (during the last day or two the breathing had been rather laboured). The lungs and heart were healthy, as also the abdominal viscera.

Dr. Heim lays stress on the bearing of "epidemic influences just now at work." Although he rather inclines to regard this disease as identical with the putrid sore-throat, epidemics of which had recently been recorded, neither his own case nor those by Dr. Ludwig would bear out such a view, for it was specially remarked that the fauces were hardly affected at the commencement of the disease. Still less would it be allowed that there is any connexion with Bretonneau's "diphtherite" or Sgambati's "garatillo."

It will thus be seen that Dr. Ludwig, of Stuttgart, was the first to draw serious attention to this very important disease, and he did so apparently in ignorance that anything at all like it had ever been described before. Thus it is that the disease is sometimes known by the title of "angina Ludovici," or "angina Ludwigii."

I have not been able to trace out any records of this disease in an epidemic form since Ludwig's time; but various authors have recorded sporadic cases; notably among these are the following:—

Dr. Rösch relates the following case.[2] It is clearly one of the same kind, and occurred not far from Stuttgart. On referring to other papers contained in this volume, I find

[2] Medicinisches Correspondenz-Blatt, vol. v., No. 15, 1835.

that zymotic disease of a rather severe type was very prevalent. It is described as "gastro-nervous" and also a "rheumatic, inflammatory, gastric disease." A countryman, aged fifty, strong and robust, was taken ill in April with "angina erysipelacea." The pharynx was much swollen, the parotid and whole side of the neck as low down as the manubrium sterni were swollen and erysipelatous, the tongue was coated, the pulse was rather frequent. Emetics and leeches were ordered and repeated. On the third day the swelling was less, and a very stinking ichorous fluid began to flow. The swelling afterwards increased again, and some two or three days later it was opened, although there was no fluctuation. Fetid ichor and blood flowed out, and subsequently large shreds of dead muscle and connective tissue. No pus whatever came out. The induration extended towards the mastoid process, which was bared, to the sternum, and backwards towards the pharynx. The patient died.

Mr. Bickersteth, of Liverpool, has published some "Clinical Observations on Submaxillary Cellulitis."[3] He records cases which correspond with the disease as described by Dr. Ludwig. One case is especially typical. It occurred in 1861. A man, aged forty, applied at the infirmary for admission, having been ill only three days. On examination, "a general solid condition of the deeper structures of the neck was felt. The tongue was healthy, but it, together with the floor of the mouth, was pushed considerably upwards." He died shortly after admission. At the autopsy "nothing abnormal was found superficial to the deep cervical fascia, but beneath this there were evident traces of diffuse cellulitis. All the muscular interstices and the connective tissue surrounding the trachea were infiltrated with a sero-purulent fluid, extending upwards to the root of the tongue and downwards into the anterior mediastinum. ..... The sublingual and submaxillary glands were surrounded by inflammatory exudation, but their glandular tissue appeared perfectly healthy and natural. The tracheal mucous membrane was quite healthy."

Mr. Henry Croly contributed to the *Dublin Journal of Medical Science* (May, 1873) a series of interesting cases of this disease, under the title "Observations on Diffuse Inflammation of the Areolar Tissue of the Neck (Cellulitis); importance of early, free, and deep incisions." One of these cases (No. 4) was very typical of angina Ludovici; but the others were neither as severe nor as fatal as this last-named disease. Mr. Croly's paper is an interesting contribution to the subject, and his suggestions for treatment are sound and wise.

In the *British Medical Journal* for Jan. 18th, 1879, Mr. Furneaux Jordan refers to the disease in a clinical lecture on Idiopathic Gangrenous Cellulitis around the Rectum. He says: "An ailment at which I have already hinted as being very similar to the one of which we are speaking, is cellulitis of the neck. Here, also, in men, chiefly in adults who have transgressed in matters of eating and drinking, and who have been exposed to marked cold, a dense collar of inflamed cellular tissue forms at the front of the neck, associated with extreme prostration, fever, and copious frothy expectoration. It is extremely fatal." A typical case is related, and a diagram added to show the extent to which the disease had spread into the mediastina and to the pericardium.

The late Mr. Gascoyen published a case of Sphacelus of the Thyroid Gland.[4] There are so many points of resemblance in this case to angina Ludovici that I should be inclined to include it in this disease. A further study of other cases of gangrene of the thyroid gland rather supports me in this view. Professor Lebert[5] gives cases; one seems very typical. At the end of his report he says: "The rapid onset of the gangrene was remarkable: there were no previous symptoms to indicate it; and, although the whole gland was completely destroyed, there was no hæmorrhage."

A consideration of the writings and cases just alluded to, together with the results of my own experience, lead me to suggest the following as a suitable and practical arrangement for the different classes of cases, which from time to time come under observation.

1. Idiopathic (Angina Ludovici).

2. Traumatic, occurring after (*a*) cut-throat; (*b*) gunshot and other injuries of the neck; (*c*) tracheotomy; (*d*) impaction of foreign bodies in the pharynx.

3. By extension (*a*) from lymphatic glands; (*b*) operations within the mouth; (*c*) from salivary glands (after impaction of calculi); (*d*) periostitis of jaw.

1. *The idiopathic form.*—From the preceding abstract of cases, it will be seen that this form is a dangerous and most frequently a fatal disease. It seems to prevail not exactly as an epidemic *sui generis*, but rather concurrently with other and more common forms of epidemic disease. Thus, at one time it occurred while erysipelas was common; at another, when measles and scarlet fever were prevalent; and again, while "putrid sore-throat" was raging. Nevertheless, in the most marked cases, the tonsils and pharynx are described as having been normal. So, too, in my own cases, I could not detect any morbid alteration in the pharynx or mouth. In the second case I have related, the cellulitis was complicated with sudden swelling of the tongue; in this respect it seems to agree with the description quoted from Aretæus. I can only explain this swelling of the tongue by referring it to compression on the lingual vein by the induration of the cellular tissue through which it had to pass. This seems to me to best explain both its sudden onset and equally sudden subsidence. As regards treatment, it must be bold as well as prompt. Free incisions into the indurated cellular tissue, deep enough to open up the various sheaths of the deep cervical fascia, must be carefully made, so as to let out the sanious ichor, and thus prevent its burrowing. Bark and ammonia, or quinine, are also indicated. Our English text-books do not contain any very full account of this disease. In Vol. IV. of Holmes's "System of Surgery," Mr. Durham describes a disease which I think must have certain affinities with it, under the title of diffuse cellular laryngitis.

2. *The traumatic form.*—Surgeons are well acquainted with this form of cervical cellulitis. It is a frequent and dangerous complication of all kinds of injuries to the neck. Mr. Durham (Holmes's System, vol. ii., p. 444), speaking of the sources of danger, and after complications common to most of these wounds, says: "Abscesses and purulent effusions originating in the immediate neighbourhood of the wound may spread rapidly in various directions, through the loose laminated areolar tissue, and produce the gravest symptoms. Sometimes they run down to the root of the lung, or implicate the pleura and fatal results ensue." I have seen two or three cases of cut-throat in which death was due to this cause.

I remember, too, during the Franco-German war, more than one gunshot wound of the neck—not a dangerous one in itself—in which death subsequently occurred from pus burrowing down and getting into the pericardium.

Cellulitis occurs also as a complication after tracheotomy. The first case in which I saw it occurred at the Children's Hospital, and almost cost the child its life. Further personal experience leads me to believe that it is especially liable to occur after an ill-performed operation, during which (in the process of exposing the trachea) the intermuscular planes have been too freely opened up. Cellulitis of the neck has occasionally followed on impaction of foreign bodies in the pharynx or tonsils. In the *Medical Times and Gazette* for 1858, vol. ii., p. 5, Mr. Pretty relates the case of a child aged eight, who died of gangrenous cellulitis, caused by the impaction of a fish bone in the pharynx, ten days after the accident.

Both Dieffenbach and Dupuytren have referred at some length to the cases of cellulitis of the neck following injuries, and it was by them regarded as a serious and often fatal complication.

In treating all these forms of the disease I have found the greatest benefit from the use of liquor plumbi made into a lotion with milk instead of distilled water.

3. *By extension.*—This is by far the most common form of the disease. As a result of inflammation or abscess in the lymphatic glands, or of periostitis, or occasionally after fracture of the lower jaw, it is too well known to require more than mention. There is one form of cellulitis which is very destructive, following not infrequently after scarlet fever or measles; the glands will inflame and slough, and this sloughing goes on sometimes with great rapidity, and destroys the surrounding soft parts extensively. Cellulitis has also occurred after a too free use of mercury. Occasionally, too, it follows on operations within the mouth, more especially after operations undertaken for removal of the tongue.

In considering the most appropriate treatment for these cases, we must bear in mind that much of the danger arises

[3] Liverpool Medical and Surgical Reports, 1869.
[4] Transactions of Royal Medical and Chirurg. Soc., vol. lix., p. 113.
[5] Die Krankheiten der Schilddrüse. Breslau, 1862.

from the fact that the inflammation is seated beneath the deep cervical fascia. This fascia consists of several layers, the undermost of which is continuous with the pericardium. Anatomists tell us that the fascia varies in different bodies. Is it fair to surmise that the danger in some cases is very great owing to the thickness and firm attachments which this fascia then presents?

Old Cavendish-street, W.

CASE OF DISEASE OF THE AORTIC VALVES PRESENTING SOMEWHAT UNUSUAL PHYSICAL SIGNS.

BY DAVID DRUMMOND, M.A., M.D.,
PHYSICIAN TO THE NEWCASTLE-ON-TYNE INFIRMARY.

R. D——, aged twenty-nine, a carman, was admitted into the Newcastle-on-Tyne Infirmary on the 26th of June last, giving the following account of his illness. He had been in excellent health previous to the close of last year, but, owing to exposure during the very severe weather, whilst following his employment, towards the end of December he was laid up with a cold, which resulted in attacks of pain in the chest. (What the exact character of this initial pain may have been it is impossible to arrive at.) A few weeks subsequently the pain assumed a spasmodic nature, coming on during exertion, and lasting from fifteen to twenty minutes. About this period—i.e., a month after the commencement of the attack—he began to be troubled with beating in the chest, which has gradually increased up to present. One month previous to admission he became aware of a "rubbing" accompanying the beating, and at the same time could hear a "loud rasping noise going on in his chest." He has never been at all troubled with shortness of breath, not even when running up-stairs; coughs infrequently, without expectoration; has never had hæmoptysis nor suffered from rheumatism. He is a tall and somewhat spare man, with an anxious expression of face, evidently caused by the repeated attacks of angina pectoris, which had prompted him to seek relief in the hospital.

On stripping his chest, my attention was at once called to the violence of the pulsation, cardiac and arterial. Almost the entire thorax anteriorly, especially the left side, heaved in a tumultuous manner; the arteries of the neck and the subclavians coursing beneath the clavicles also pulsated with great force. An extremely rough and rasping thrill "frémissement cataire" was communicated to the hand when placed on any part of the front of the chest, but was best marked in the left parasternal line, corresponding to the second and third interspaces. This thrill was distinctly diastolic in rhythm, and was accompanied by a loud harsh murmur, best heard in the pulmonary area and to the middle of the sternum, so loud as to be easily audible six or eight inches from the chest-wall without the stethoscope, and distinctly heard by the patient himself. This diastolic murmur, though audible all over the thorax, became comparatively feeble in the mitral area and round to the axillary line, but particularly loud between the shoulders, and especially to the right side of the spine, and could be heard as a loud harsh murmur in the carotids, subclavians, abdominal aorta, and left femoral. A murmur with the first sound was also present, loudest at the top of the sternum, but very faint in the mitral area, and distinctly audible in the vessels before mentioned, making a double arterial murmur. The heart was much hypertrophied, the cardiac area of dulness being markedly increased. On the left parasternal line, dulness commenced at the lower border of the second rib, and was lost downwards in the liver dulness; in a horizontal direction, on a level with the fourth rib, it extended from the right parasternal line to the axillary line. The pulse at the wrist was visible and distinctly "water-hammer" in character, but the superficial vessels themselves were free from atheromatous disease. He complained very much of the attacks of angina, three or four of which he experienced each day. Physical examination of the lungs revealed nothing abnormal. The urine was free from albumen, and a fair quantity was passed each day. There was no œdema of the ancles or elsewhere; in fact, as he himself remarked, "But for the constant beating in my chest, and the noise up into my ears, which is like to open my head, and the pain, I have never been in better health in my life." Now and again there was a "tumble" in the beat of the heart, as if an aborted systole had occurred; this intermission was very infrequent, about once in every two minutes. The enormous percussion stroke and huge tidal wave in the sphygmographic tracing, indicating very great hypertrophy of the left ventricle, with a free (for exit) aortic orifice, the dicrotic wave being nearly abolished, it is probable there is a good deal of regurgitation.

The patient was treated by considerable doses of liquor arsenicalis (Fowler's solution) seven drops for the dose three times a day, with fifteen drops of tincture of digitalis. The attacks of angina were soon arrested and kept in abeyance by the arsenic, and the patient left the infirmary very much relieved, though still complaining of the violence of the pulsations, and the loudness of the noise in the head.

Remarks.—The case is of interest,—1st, as being an example of aortic regurgitation presenting the signs of extremely harsh and loud murmur with rasping thrill. 2nd. There was undoubtedly very considerable regurgitation back into the left ventricle, without any constitutional disturbance; the evidence of the large amount of regurgitation being (*a*) double murmur in the arteries (Balfour's "Diseases of the Heart"); (*b*) great hypertrophy; and (*c*) obliteration of the dicrotic wave in pulse-tracing. 3rd. The case shows well the great value of arsenic in angina pectoris; in all the cases I have used it, pushing the drug up to ten or twelve drops of Fowler's solution for the dose, there has been marked benefit.

Newcastle-on-Tyne.

THE CONDITION OF THE CERVIX UTERI IN CASES OF PLACENTA PRÆVIA.

BY GEORGE ROPER, M.D.,
PHYSICIAN TO THE EASTERN DIVISION OF THE ROYAL MATERNITY CHARITY, LONDON.

IN the mind of everyone engaged in the practice of difficult midwifery, placenta prævia has always occupied a place of importance. Its treatment, in my own estimation, is not quite clear, but I am not going to enter on the management of this anxious form of complex labour at present. I will confine my remarks to the observation which I wish to record. I will not say that it has hitherto been unobserved, but, so far as I can learn, no description of it has as yet been published. I have the permission of my friend Dr. Barnes, whose knowledge of the literature of the subject is second to none, to say that he is unacquainted with any such record in English or foreign medical writings.

The condition to which I refer, as a clinical fact, consists in a peculiar induration of the os or cervix uteri, at the site of placental attachment, dependent on an alteration of the uterine texture of that part on which the placenta is implanted. From clinical observation it may be said, that wherever the placenta grows, whether on the fundus or elsewhere on the inner uterine surface, the area of attachment is marked by induration and thickening of the uterine tissue. It is a common belief that the structure of the cervix uteri in placenta prævia is soft and easily dilatable, and is rendered more so by the profuse bleeding which usually happens in these cases. Leishman, in the second edition of his "System of Midwifery," p. 439, says: "We shall probably find that the os and cervix uteri are somewhat peculiar to the touch. This peculiarity consists in a *doughy* feeling, due to the unusual thickness of the cervix, which is necessarily permeated with large vessels for the placental circulation." And again, at p. 446, he says, in speaking of the operation of podalic version in placenta prævia: "During the course of this procedure, which is often *easier of execution than under ordinary circumstances, owing to the relaxed state of the uterus*, the result of hæmorrhage." Schroeder, in his "Manual of Midwifery," translated by Dr. Carter (Sydenham Society), p. 312, remarks on the introduction of the hand into the uterus for the purpose of effecting podalic version in placenta prævia: "The lower

uterine segment being generally *soft and yielding* in placenta prævia, this often succeeds very early." In my own experience the clinical fact has been that induration and thickening corresponding to the extent of placental attachment have been unusually great, and the induration has constituted one of the greatest difficulties in the way of safely effecting forced delivery.

If we have to deal with a case of placenta prævia in which the placenta is centrally placed, then there is induration in the entire circumference of the inner os; if with one of a partial kind, then we have a demonstrative proof, in that we are able to compare that part of the os internum to which the placenta is attached, with that portion to which it is not attached; the former will be found indurated and unyielding, the latter soft and elastic. The following report will give an illustration of this condition.

On the 22nd of May, 1879, a midwife of the Royal Maternity Charity requested my attendance on a patient, aged twenty-nine, in labour with her fifth child, at the end of the eighth month of pregnancy. She had had much flooding, but not to such an extent as to constitute present danger. The os uteri admitted two fingers. The placenta was partially over the os, and was attached to the anterior segment of the uterus. At the posterior edge of the placenta I could feel the fœtal head, and between the head and the symphysis pubis was one of the feet; a loop of pulseless funis was hanging down through the os. Had there been any imminent danger to the mother, necessitating immediate delivery, the obvious course would have been to perforate the head. With two fingers passed through the os uteri for the purpose of artificially detaching the placenta, the foot was seized and brought down, and the child easily turned. The os uteri was not sufficiently dilated nor dilatable enough to allow of extraction. I therefore pulled the breech of the child down only so far and so forcibly as to test its dilatability. The condition of the os uteri at once afforded evidence of induration and roughness of surface and inelasticity of its anterior portion to which the placenta had been attached, while the posterior segment which had not been implicated in the placental attachment was smooth, soft, thin, and elastic. As there were no labour pains, I determined not to use any further effort, for the present, to deliver; but directed the midwife to use gentle traction in co-operation with labour pains when they occurred. I left the patient at 6 A.M., and visited her again at 10 A.M. There had been no labour pains. I passed my finger up between the breech of the child and the margin of the os uteri, to ascertain whether the os had become more dilatable; I thought it had, and applied a sufficient tractile force to bring the fœtal chest into the os uteri, when the tension of the rigid part of the os became too great to justify proceeding further. As she had scarcely any labour pains, I injected, subcutaneously, one grain of ergotine, and again left her in charge of the midwife. At 2 P.M., in company with Dr. Herman, I saw the patient again. The child had now been turned eight hours; and although its position seemed not to produce any injurious pressure, and the mother was not in any respect suffering much, yet I thought it desirable to deliver her. Dr. Herman concurred with me in what I have described as to the condition of the os and cervix. In spite of the great care and gentleness with which traction was used in liberating the head, the indurated portion of the cervix sustained a transverse laceration. At this stage, some one may say that the base of the cranium should have been perforated and delivery effected by the cephalotribe; but this is a point I am not now discussing.

I do not wish to be understood as overlooking the undeveloped state of the lower part of the uterus in these cases, occurring as they mostly do before full term; and in speaking of the os or cervix uteri, I mean the os or margin of the orifice of the uterus proper. A great distinction is to be drawn between the os internum, which is firm and thick, and the thin flabby cervix with its soft outer os.

While engaged in writing this paper, I was called to see a patient in the charity who had had flooding for a fortnight. She was thirty-six years old, and at the end of the eighth month of pregnancy with her fifth child. Although she had lost much blood, she had a good pulse, and was not much blanched. She had no symptoms of immediate danger. The os uteri was open so as to admit two fingers. The placenta was nearly centrally placed, but more posteriorly than anteriorly, for I could pass the finger in front of the anterior margin of the placenta and feel the fœtal head; posteriorly I could not reach the border of the placenta. The placenta had to a large extent become spontaneously separated, and no hæmorrhage was going on at this time, now twelve at noon. There was marked hardness, thickness, and roughness of surface all round the os internum, but more intense on its posterior segment, to which the placenta had been more extensively attached. As the flooding had ceased, I left her in charge of the midwife, hoping that, as pains came on, natural delivery would follow. I promised to see the patient again during the afternoon. At 4 P.M. the midwife became alarmed by the return of slight hæmorrhage, and sent for Mr. Lane, one of my colleagues in the charity; he kindly attended immediately, and delivered by podalic version. I had made an appointment for Dr. Herman to see her with me, for the purpose of observing the condition of the os uteri, but on our arrival she had been delivered about a quarter of an hour. I was somewhat disappointed that we had not again an opportunity of making this observation before delivery. An examination, however, soon after delivery, afforded marked evidence of the induration I have referred to; it was greater posteriorly, corresponding to the site at which the placenta had been more extensively situated; it entirely belonged to the os internum, or substance of the uterus proper, for the whole of the cervix, with its os externum, was soft and pulpy. When Mr. Lane's attention was called to it, he remarked, "I had observed it and thought there was a diseased condition of the cervix, which might give future trouble." I was therefore glad that it had made such a forcible impression on him, quite independently of any suggestion from either of us.

I have already said that wherever the placenta is implanted the uterine texture at the spot undergoes thickening and induration, and the surface of the placental area is rough. These conditions are to be observed whenever the hand has to be introduced into the uterus after delivery; it matters not on what part of the inner uterine surface the placenta area may be. We see them also in post-mortem examinations. In this subject there is a fine field for histological research. An interesting paper by Dr. John Williams has been published in the Obstetrical Society's Transactions, vol. XX., "On Some of the Changes in the Uterus resulting from Gestation," &c., from which I will make a short quotation, as bearing on this topic:—"The veins or sinuses are enlarged throughout the body of the uterus during gestation, but the enlargement is far greater in that part of the wall to which the placenta is attached. This, when cut into towards the end of pregnancy, presents almost a trabeculated structure, so completely riddled is it with anastomosing venous channels of considerable size." Much might be said on the importance of this condition in reference both to the treatment of placenta prævia and its prognosis after forced delivery; but this would be going beyond the object of this paper.

West-street, Finsbury-circus.

STONE IN THE BLADDER OF A PATIENT EIGHTY-EIGHT YEARS OLD;

BIGELOW'S OPERATION; SUCCESS PERFECT.

BY W. F. TEEVAN, B.A., F.R.C.S.,
SURGEON TO THE WEST LONDON AND ST. PETER'S HOSPITALS.

ON September 9th, in consultation with Dr. Kempe, of Ladbroke-grove-road, I saw Colonel ——, eighty-eight years of age, who served throughout the Peninsular war. From notes taken by Dr. Kempe, it appeared that the patient passed two calculi many years ago. For a long time he had occasionally suffered from pain in the loins, and had seen red gravel in his urine. One year ago the gravel ceased to appear, and he began to be troubled with a frequent desire to micturate, and to have a dull aching pain in the perineum. Now and then he saw a little blood in his urine. Latterly his pains had increased, and the water had become very thick and offensive. For the past three months he had been confined to bed. During the last few weeks he had become very excitable and unmanageable. He could get but little sleep at night, as he was so frequently troubled to urinate.

When I saw him he was greatly agitated and in much pain. I introduced a very slender, short-beaked Mercier's sound, which struck a hard stone immediately it entered the bladder. The third lobe of the prostate was enlarged, but the lateral lobes were of normal size. The patient was of middle height, and decidedly muscular; and although his face was haggard from pain and want of rest, its appearance was nevertheless healthy, and his eye was clear, bright, and piercing. He was born at Beverley, in Yorkshire, the county which is reputed to produce the strongest men and the best horses in England. His mother was a native of Cambridgeshire, but he did not remember where his father was born.

When the Colonel was informed of the nature of his malady he urgently demanded an operation. I submitted a specimen of his urine to Dr. George Harley for examination, who reported that there was no evidence of any renal disease. Dr. Thorowgood examined the patient's heart and lungs, and informed me that there was nothing to contra-indicate an operation. Dr. Kempe and I then told the patient's relatives that an operation for the removal of the stone could be undertaken with a fair chance of success. They readily consented to what the patient so urgently desired. On Sept. 13th, at 2 P.M., the patient was put under the influence of ether by Mr. T. G. Alderton. There were present Dr. Thorowgood, Mr. Butlin, Dr. Kempe, and Dr. Hubbard. In the space of twenty minutes I completely pulverised and evacuated a lithic-acid stone, measuring one inch and a quarter by one inch. The calculus was excessively hard, and the noise produced by breaking up even the smallest fragment was audible to all present. I used three lithotrites, introducing them eight times in all. The evacuating tube, No. 26, which slipped in with ease, was passed three times. The patient was sounded by Mr. Butlin, Dr. Kempe, and myself, but not a particle of stone could be discovered. There was a little blood lost at the operation, and for four days afterwards the urine was sanguineous. Much smarting was experienced for forty-eight hours whenever the water passed, but it was entirely confined to the penile urethra, and on no occasion was there the slightest pain or tenderness in the hypogastric region. The variations in the pulse and temperature were taken twice daily by Dr. Kempe. The highest temperature recorded was at 6 A.M. on Sept. 15th, when it reached 101°, the pulse being 98. The patient's progress after the operation was one of gradual improvement. The urine began to clear on the fifth day; the nights were good and the appetite keen; and on Sept. 24th he left his bed, to which he had been confined for three months. Five days later he went for a drive.

I last saw the Colonel on October 4th. He was then absolutely free from all pain, and was very cheerful and happy. He could hold his urine for four hours, and got a good night's rest. The urine was clear, and there was no phosphatic deposit. Dr. Kempe, in his letter to me dated Oct. 11th, states that the patient says "he feels better and stronger than he has done for many years, and his sight, which was very bad, has considerably improved since the operation."

Portman-square, W.

THE TREATMENT OF DIPHTHERIA.

BY THOMAS GURNEY, M.D.,
SENIOR PHYSICIAN TO THE CITY DISPENSARY.

SINCE I have held the position of physician to the City Dispensary I have had considerably more than one thousand cases of disease of the throat under my care, many of which, both in public and private practice, have been cases of diphtheria. About this, by far the most serious disease of the throat, we have much to learn. The stiffness in the neck, the disturbance of the circulation, the rapid rise of temperature, before any affection of the throat is observed, all point to its being a blood poison calling for prompt and decisive treatment.

The two questions that arise when called to a case of diphtheria, as, indeed, in all diseases, are, How does the disease tend to kill the patient? and How does Nature endeavour to rid herself of the disease?

Diphtheria tends to kill by suffocation and by its poison exhausting the vital energy. Suffocation may be either accidental, or as a natural result of the throat affection—accidental if, when the membrane is thrown off, it becomes lodged in the larynx; natural if the swelling inside the throat shuts off the supply of air to the lungs. Nature will attain the mastery over her enemy if the strength be kept up and the deposits arrested. With these points to guide us we know that the arrest of the disease and nutritious support are our great aim. To succeed in this I have adopted a respirator made of the ordinary shape and size, the front being minutely perforated. Inside of the respirator I have two or three perforated plates inserted, between which I place common tow (not cotton-wool); I then drop on each of the layers of tow ten to twenty drops of a solution of carbolic acid, creasote, and glycerine. Should the patient tire of these, I use turpentine or iodine. I place the respirator over the mouth, and keep it continually applied. My next idea is to provide the patient with warm moist air. To do this I have two kettles of water kept boiling on the fire; attached to the spouts of the kettles I have an elastic tube of an inch calibre, at the end of which is a spray-like nozzle, which I put immediately under the mouth of the patient. By this means I get my disinfectant remedies carried moist to the throat. As a sedative to the pain I know nothing so comfortable to the patient. Previous to this I take care to give an active purge, which usually removes offensive stools of effete, poisonous matter. Internally I give aconite in frequent small doses—two to four minims of the tincture; at the same time freely supporting the strength with milk, cream, and eggs, with or without brandy, and beef-tea *ad libitum*. As a drink, I recommend patients to take as much chlorate of potash in solution as they can without vomiting. I have found chlorate of potash highly beneficial in all cases of a low typhoid character. If this is objected to, I advise the juice of lemon to be taken—by many thought to be a specific for diphtheria. Should the system be very weak, I prescribe belladonna instead of aconite; but I find better results from the latter. As soon as the urgent symptoms have subsided I order strychnia, with or without nitro-hydrochloric acid—this not only being the best tonic, but also preventing the paralysis which so often follows diphtheria. I have found this treatment to be highly beneficial, but, knowing the tendency there is to rheumatism after this terrible disease, I never forget our friend the bicarbonate of potash.

Rectory-road, N.

EMPYEMA IN AN INFANT AGED THIRTEEN MONTHS, CURED BY ASPIRATION.

BY JOSEPH HUNT, M.D. LOND.,
PHYSICIAN TO THE WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.

THE following case will serve as an addition to Dr. Barlow's list in THE LANCET (Dec. 21st, 1878).

Florence B——, aged thirteen months, was brought to my out-patient room on Nov. 26th, suffering from dyspnœa, emaciation, cough, and excessive night-sweats, after an illness of a month's duration. On examination, the right side was bulged, and measured half an inch more than the left, while expansion was very deficient; vocal fremitus present, but weakened; percussion dull all over, dulness scarcely extending over the middle line; breath-sounds weak; no displacement of organs; no œdema; respiration 60; pulse almost imperceptible; weight 15¼ lb.; temperature (rectal, 12 mid-day) 100·4°. The patient was immediately aspirated, and nearly five ounces of very thick sweet pus withdrawn. The respiration and pulse both improved during the operation, and the chest became resonant throughout almost its whole extent. The right side of the chest was firmly strapped, and the patient was ordered iron wine and cod-liver oil, of each half a drachm three times a day, and some grey powder.

Although, contrary to advice, the child remained an out-patient, and had to be carried some distance, in very inclement weather, three times a week, she progressed most satisfactorily. There was no fresh secretion of pus, as was proved by the introduction of the aspirator needle twice—on Nov. 29th and Dec. 6th; and she was discharged on Dec. 22nd in the following condition: Temperature normal.

Gaining weight. Night-sweats entirely ceased. Appearing, as the mother said, "quite well." Chest: Good resonance to nipple; behind, absolute dulness commenced at the tenth rib, but there was deficient resonance above this, and the note up to the middle of the scapula was not so clear as on the other side; breath-sounds nearly as loud as on the opposite side. The right side now measured about a quarter of an inch less than the left, and expansion was still slightly deficient.

Wolverhampton.

A Mirror OF HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum, tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

LONDON HOSPITAL.

SURGICAL CASES AND CLINICAL REMARKS.

(Under the care of Mr. HUTCHINSON.)

FOR the following notes we are indebted to Mr. Frederick Treves, F.R.C.S., surgical registrar.

1. *Syphilitic Herpes.*—The patient was an unhealthy-looking man, a discharged soldier, aged thirty-five, with peculiar eruption running round the left side of his chest, at once recognisable as a form of herpes zoster, or "shingles." There was nothing in the position or general outline of the eruption that would distinguish it from ordinary herpes zoster, but it would have been difficult to fail to notice at the first glance that its aspect was in some way different from what is usually seen in a simple case of this disease. On inquiry it was found that the eruption had existed for no less a period than nine months. The patient stated, moreover, that it was "much better" a few months before, but that it broke out again in (what he termed) a second attack, although the side had never been entirely free from eruption, even in the interval of amelioration. On examining the eruption closely, it was seen that in some places there were distinct and prominent scabs; the eruption here had evidently taken an ulcerative action, and approached in some little degree to the characters of rupia. The skin where the eruption had departed was of a dusky-red colour, and presented here and there a faintly depressed scar, showing that there had been a loss of tissue. It was ascertained the man had had undoubted syphilis; in fact, he had a large periosteal node on the forehead at the moment. On this account, but still more from certain peculiarities of the eruption itself, Mr. Hutchinson said he was of opinion that this was a case of syphilitic herpes, and as such a very rare affection.

"Herpes," Mr. Hutchinson went on to say, "is, as is well known, a skin disease of nerve origin. It is produced through some particular nerve influence, and, having regard therefore to its origin, we must consider the present case not as an example of common herpes occurring in a syphilitic patient, and so possibly somewhat modified by that disorder, but as a case where the poison of syphilis has caused such nerve changes as to bring about this eruption. The action of syphilis in this case is through the nervous system, and the eruption must be considered as an expression of some syphilitic disturbance of nerve. Thus we see syphilis as an imitator of typical skin eruptions, and, as I have often stated, it rarely, very rarely, imitates herpes. I consider this eruption to be the syphilitic form of herpes on the following grounds:—The man is syphilitic. The skin disease persists—it has persisted for nine months, with a recurrence of eruption during that time, whereas common herpes tends to spontaneous cure, as do all skin affections that have their origin in the nervous system. It is most rare, too, for common shingles to persist for so long a period as nine months. It is true that it is sometimes very tardy in its disappearance, but, I think, never to such a degree as obtains in this instance. The scar left here and there by the clearing up of the eruption is depressed, distinct, and of a dusky-red colour. The eruption is at places almost rupial. Finally, there is one feature about the case that makes it—as a case of syphilitic herpes—very peculiar. Syphilitic herpes is nearly always symmetrical on both sides of the body, but in the present instance the eruption appeared on one side only, the right chest being perfectly intact. The case, therefore, must be regarded as extremely unusual."

2. *Obscure Injury to Hip.*—Mr. Hutchinson then showed an interesting case of obscure injury to the hip that was in the hospital under the care of Mr. McCarthy. A young lad, aged sixteen, a clerk, healthy, well-developed and intelligent, gave the following account of himself:—In August, 1878, while bathing in a swimming-bath, he attempted to jump over a horizontal bar into the water. He slipped, struck his right hip against the bar, fell upon a wooden platform beyond the bar, again striking the same hip, and then tumbled into the water. He was, however, able to swim out of the bath, and to proceed home without assistance, riding as far as possible in an omnibus, and accomplishing the remaining short distance on foot. He did not consult a medical man, and indeed had never sought advice until he applied at the hospital (in March last). The morning after his accident he proceeded to his office as usual, walking with no other assistance than a stick, from Aldgate to the neighbourhood of Paternoster-row. This effort cost him considerable pain about the hip, and "made him limp." He had, however, walked to and fro daily, without missing a single business day, and although the pain soon left him, he always walked a little lame, and with a certain amount of discomfort. He stated that the right leg was not shortened at first, but that, as month after month had gone by, the right leg had gradually become shorter, and his mode of progression changed from an uncertain limp to the "up and down" movement associated with a shortened extremity. During the last month or so he had again used a stick on account of the shortness of the limb. He had not felt able to run or indulge in violent exercise since the accident.

On examination, the right leg was obviously shortened, and on actual measurement was found to be more than one inch less in length than the sound limb. The lad walked rapidly, with no pain, and no other discomfort than the shortness of the limb produced. The right limb was smaller than the left, and had apparently less muscular development; it was perfectly straight, and was neither everted nor inverted. Passive movements excited no pain, and were only limited in the direction of flexion. When the patient was recumbent, the heel could be lifted about two feet from the bed, but any elevation beyond that point was accompanied by movement of the pelvis. The great trochanter was unduly prominent, and was approximated to the iliac crest.

The diagnosis was necessarily obscure, and rested mainly upon conjecture. It was suggested, as a possible explanation, an impacted fracture of the neck of the femur within the capsule, or an injury to the epiphysis of the head of the bone, or a simple contusion of the bone. The first-mentioned lesion would seem improbable in face of the fact that the boy was never laid up by the accident, and walked to his business next day without excessive difficulty. It is well known that a simple contusion of the bone is stated to have produced such wasting of the neck of the femur as to cause considerable shortening of the limb; and we can understand how an injury to the epiphysis, short of actual fracture or separation, may produce a similar shortening by inducing interstitial changes and absorption in the cervix femoris.

NORTH STAFFORDSHIRE INFIRMARY.

CYSTIC TUMOUR OF THE RIGHT HALF OF THE LOWER JAW; REMOVAL; RECOVERY; REMARKS.

(Under the care of Mr. SPANTON.)

FOR the notes of the following interesting case we are indebted to Mr. G. Russell, M.B., house-surgeon.

M. W——, aged forty-seven, married, was admitted on Jan. 13th, 1879. The family history was good, and she enjoyed perfect health until the appearance of the present tumour. In December, 1876, she noticed a swelling the size of a marble over the angle of the right lower jaw; it was immovable, hard, and painless, but gradually increasing in size. In September, 1877, she was an inmate of the infirmary; and at that time, on examining the right side of the face, a rounded swelling was observed, reaching up-

wards to the lower margin of the malar bone, downwards to the extent of half an inch below the margin of the lower maxillary bone, and extending backwards beyond the border of the jaw. In front it projected as far as the first molar tooth. The surface was smooth and fine; its centre somewhat elastic; while the whole was firmly attached to the bone. By the mouth it was felt to spring from the outer surface of the jaw, immediately beneath the alveolar border. The teeth were good, except the last molar, which was carious, but never gave her any pain; on being extracted, the fangs were found to be absorbed. The sensation on the right side of the chin was greatly impaired. The central part of the tumour was tapped with a fine trocar, and about six drachms of clear fluid drawn off, but this did not seem to diminish the size of the tumour.

On readmission in January last, there was a swelling as large as an orange extending forwards on to the face, while below and behind it reached beyond the natural border of the bone, and in front as far as the first bicuspid tooth. The jaw could not be defined from the tumour. The most prominent part of its surface was fluctuant, and here "the egg-shell crackle" could be made out. The mouth was firmly closed, and the patient had not eaten solid food for more than three months; her general health had consequently become much impaired. Several years previously the patient had suffered from menorrhagia. As it was conjectured that this might throw some light on the nature of the tumour, a vaginal examination was made, and the uterus was found to be only slightly hypertrophied. The sound was passed easily, and the cavity was normal in length. On the night of admission (Jan. 13th) the tumour bled freely into the mouth, and on drawing aside the cheek a lesion was discovered running parallel to the alveolar border, from which dark venous blood was oozing; this became so free that it was found necessary to plug the space between the teeth and cheek with lint.

On the 18th, under the influence of chloroform, the tumour was excised. An incision was made along the lower border of the jaw and posterior margin of the ramus, and the flap thus formed was dissected upwards. The tumour having been laid bare, the jaw was divided at the canine tooth, and all beyond it on the right side was removed. The tumour was then found to be one large cyst, whose walls were more or less bony, and whose consistence varied greatly at different points. The bone was excavated in its whole extent as far forwards as the bicuspid tooth, and upwards into the coronoid process and condyle; the former was perfectly hollow, while the head of the condyle was the only part of the latter which retained its normal texture. The inferior dental nerve was apparently uninjured.

On the 20th the incision was healing by first intention in the greater part of its extent; no oozing; and she partook of beef-tea freely. Pulse 90; temperature 102°.

On the 26th the right half of face was œdematous, and the angle of the flap rather dark in colour.

On February 1st all the stitches were removed; the flaps had united. There was little discharge, but the face still remained œdematous, and the angle of the flap retained the dark colour.

On the 10th she was allowed to get up and to take solid food. On introducing the finger into the mouth it was noticed that the bone was drawn towards the right side, and on examining the space a cicatricial band was found extending from the end of the bone towards the glenoid cavity, very tense, and preventing the parts from being replaced.

On March 1st the parts were completely healed. An erysipelatous blush had just appeared over right side of face. Iron was ordered, and the patient was isolated.

On the 5th the blush had greatly decreased, there being no pain, and the swelling was much less.

On the 21st the patient was dismissed well. The erysipelas had subsided, and there was no discharge. The movement was increasing, and her general health was greatly improved.

On April 26th she presented herself at the hospital. The movement of the jaw was very free, and the teeth could be applied to each other. She could masticate her food, and was enjoying perfect health.

Remarks by Mr. SPANTON.—In this case we have an unusually well developed example of simple cystic disease of the lower jaw, which appears to have been independent of dentigerous growth. I can find very few such cases recorded, though examples of the smaller cystic growths are not uncommon.

Some difference of opinion seems to prevail as to the best mode of treating the affection, some surgeons puncturing only, some incising, others gouging away the walls of the tumour; while others again advocate entire removal through the adjacent healthy structures.

A case somewhat similar is recorded as having been operated on in St. George's Hospital in 1830. The tumour contained four ounces of fluid, and the patient died on the fourteenth day from erysipelas and diarrhœa. Another is related by Mason Warren, where the tumour extended over the whole ascending ramus of the right lower jaw from the angle to the coronoid process. An incision, with removal of a portion of the tumour, was followed in eighteen months by so-called cure, but an opening remained, from which glairy fluid was occasionally discharged. Subsequently a second tumour appeared anterior to the site of the first, was similarly treated, and with a like result. (Heath's Injuries and Diseases of the Jaws, p. 390.)

In the majority of the cases on record the tumours have consisted either of multilocular cysts or small single cysts—especially those which belong to the dentigerous class. Of the former cases, several instances are recorded in which, after repeated operations of a partial character, excision had to be resorted to. Sir J. Paget records one in which, after twice removing the cyst-wall, he had to remove a large portion of the jaw; Mr. Coote had a case in which death followed incision; and others have occurred similarly from constitutional irritation. Dupuytren advocates strongly the emptying and compression of the cyst, and other surgeons since his day have been strongly in favour of some such method; but most of the instances related appear to have been of small size, such as most surgeons must have met with.

In a patient, a young woman now under my care, who had a simple cystic tumour about the size of a walnut in the region of the second lower bicuspid tooth, I excised a portion of the bony wall, and, after gouging the pulpy cavity of the cyst, left it to granulate, and the cure has been perfectly satisfactory.

But in the case of M. W—— only one course was open, and that was to remove the entire half of the bone. Owing to the height of the tumour in the parotid and maxillary regions, it was rather difficult to disarticulate the maxilla entire, but it was accomplished with very little hæmorrhage, and the result of the operation has been eminently satisfactory.

LIVERPOOL ROYAL INFIRMARY.

CASE OF STONE IN THE BLADDER; LITHOTRITY AT ONE SITTING; REMARKS.

(Under the care of Mr. REGINALD HARRISON.)

THE following case is noteworthy, chiefly because of the marked tendency to stone formation, the patient having previously been operated on twice by lithotomy and once by lithotrity. It further illustrates the practice recently advocated by Dr. Bigelow, of Boston, under the name of "litholapaxy." We are indebted to Mr. Renner for the notes of this case.

J. A——, a ship-keeper, aged sixty-three, was admitted on April 22nd, 1879. Eight years before he suffered from symptoms of stone, for which he was cut, and a calculus was removed. Within a year he was again cut at another hospital, and two calculi were successfully removed. During the year previous to admission a stone was removed by lithotrity, and at the commencement of the present year the old symptoms again returned, when for the first time he came under Mr. Harrison's notice.

On admission he was suffering from frequent micturition, pain at the end of the penis, and occasional hæmaturia. The urine was purulent and deposited phosphates in abundance. On examining him under ether with a lithotrite, a round stone of about an inch in diameter was felt.

On April 25th, the patient being placed under ether, Mr. Harrison broke up the stone, which was phosphatic, and evacuated the debris after the manner practised by Professor Bigelow. The symptoms were at once relieved, and the cystitis from which the patient had so long suffered gradually abated under treatment.

Though the calculus was most completely broken up, there were no signs of hæmorrhage, either during the time of operation or afterwards. He left the infirmary on May 15th,

1879, passing urine normally, and free from all signs of calculus. Whether, after such a history as that mentioned, he will continue free from further calculous formations remains to be seen.

After so extended an experience of stone and its treatment as this patient had undergone, it is not only interesting but proper to record his observation "that the new plan was the easiest way he had had of getting rid of a stone."

In commenting upon this case, Mr. Harrison said that it was another illustration in his own experience of the great value of litholapaxy in suitable cases. The object of this operation was to do away entirely with those ill effects which are produced by the retention and passing with the urine of broken pieces of calculi, which by their angles inflict injury on the mucous membrane of the urinary passages with which they come in contact.

A gradually-increasing experience in rapid lithotrity with evacuation of the fragments only corroborated the views advanced by Professor Bigelow, and which he (Mr. Harrison) had seen practised with so much success by the originator during his stay in Boston last year.

CITY OF GLASGOW FEVER HOSPITAL.

CASE OF ENTERIC FEVER TREATED WITH SALICIN.

(Under the care of Dr. JAMES W. ALLAN.)

THOS. A——, aged twenty-three, was admitted on Dec. 12th, 1877, which was supposed to be the tenth day of illness. The illness commenced with loathing food, and vomiting whenever he took any. He had a slight shivering in the back. Temperature 102·6°. On the 13th enteric spots were discovered, and in this case they were seen on the arms. No motion since admission. Temperature in the morning 101°. He was put on milk diet. To have acid mixture. On the night of the 13th the nurse was furnished with some powders, each of which contained twenty grains of salicin, one to be given three times a day. The administration was begun on the morning of the 14th (twelfth day). The following table presents the chief points of interest.

Day of illness.	Temperature. Morning.	Evening.
Tenth	—	102·6°
Eleventh...	101	104
Twelfth (Dec. 14th)	100·8	103·2
Thirteenth	100·4	103
Fourteenth	99·8	101·4
Fifteenth	100·6	100·8
Sixteenth	100·6	101·2
Seventeenth	99·8	101·2
Eighteenth	99	101·4
Nineteenth	98·4	100·2
Twentieth	97·8	99·8
Twenty-first	96·4	99
Twenty-second ...	97·8	98·8
Twenty-third ...	98	98·6
Twenty-fourth ...	97·8	97·4
Twenty-fifth	98·4	—

14th.—Pulse 52. Slept well; no motion. Had three powders, each containing 20 grs. of salicin.

15th.—Pulse 71. Had three powders.

16th.—Pulse 64. Had three powders. Did not sleep well. Had a shivering in the night. Had a motion yesterday and last night.

17th.—Had three powders. Patient seemed to suffer little or nothing except hunger. Said he "felt nothing wrong with him."

18th.—Had three powders. Had a formed motion last night; slept well. Said he felt "heavy."

19th.—Had three powders. Had a shivering last night; no pain.

20th.—Had one powder in the morning. Had not had motion for two days. Given enema; had formed motion.

21st.—No powder; took milk and beef-tea; acid mixture.

22nd.—Felt well while lying in bed, but on getting up heavy and dizzy. No medicine except acid mixture.

24th.—Motions natural.

25th.—Had a good night. To have arrowroot.

On January 30th, 1878, he was dismissed, well.

A glance at the above figures shows that while the drug evidently depressed the temperature, it did not (except on fifteenth and sixteenth days of illness) obliterate the characteristic morning remission and evening exacerbation; and, further, that while the case was a mild one, it ran about the usual course.

Medical Societies.

PATHOLOGICAL SOCIETY OF LONDON.

Growth in Left Ventricle with Embolism.—Mollities Ossium with Myeloid Tumour.—Papilloma of Fallopian Tubes.—Suprarenal Disease without Bronzing of Skin.—Thoracic Tumour with Secondary Growths in Brain.—Spontaneous Disappearance of Xanthelasma.

THE first meeting for the session of this Society was held on the 21st inst., the President, Mr. Jonathan Hutchinson, in the chair. The subjects brought forward were various, and all of considerable interest. The question of mollities ossium associated with tumour was raised by Mr. Butlin, and a specimen of Mr. Doran's of a papilloma of the Fallopian tubes gave rise to discussion. Addison's disease and xanthelasma were also before the Society, the former in cases of suprarenal lesion without bronzing of skin, by Dr. Moore; the latter in a case, almost unique of its kind, where patches of xanthelasma had spontaneously disappeared. This case gave rise to some discussion as to the nature and evolution of the affection. Several specimens, which are enumerated at the close of this report, were exhibited without oral communication.

The PRESIDENT, in taking the chair, said that they were about to open the thirty-fourth annual session of the Society, and he hoped it would prove to be full of earnest work and prolific in good fruits. The new plan of exhibiting specimens by card was commenced that evening. It was entirely optional to members as to which way they would prefer to bring forward specimens, but he urged that all specimens, whether shown on this plan or on the old method, should be on the table half an hour before the chair was taken.

Mr. BUTLIN showed a specimen of Fibroid Growth in the Left Ventricle, with Embolism in the Brachial, Superior Mesenteric, and Hepatic Arteries. The patient was a man twenty-one years of age, admitted into hospital for what, at first sight, was thought to be frost-bite of the fingers. Five or six days later he was seized with abdominal pain, hæmatemesis, and died in a state of collapse on the second day of the seizure. There was gangrene of the tips of the first and third fingers of the left hand, with plugging of the brachial artery for some distance above its bifurcation, and of the ulnar beyond. The central part of the brachial plug was older than the rest, and decolorised. The jejunum was gangrenous, fæcal oozing occurring from points in its wall, and the superior mesenteric and hepatic arteries were occluded by clots of about the same date as that in the brachial artery. On the posterior wall of the septum in the left ventricle was a fibroid growth one inch and a half in diameter, and one-third of an inch thick. He did not think it was syphilitic in nature, as in a case shown by Dr. Pye-Smith. A similar specimen had been shown by Dr. Greenfield. Speaking of the gangrene of the bowel following occlusion of the mesenteric artery, he suggested that in a case brought forward by Mr. Howse, where a similar association was met with, possibly embolism from clots in the pulmonary veins (there was old broncho-pneumonia and bronchiectasis in the case) gave rise to the mesenteric plugging, rather than that this was due to thrombosis from ulceration of the bowel, as Mr. Howse supposed.

Mr. BUTLIN then exhibited specimens of Mollities Ossium associated with Myeloid Tumours, from a man fifty years old, who died in November, 1877, from the effects of fracture of the femur, having suffered from two myeloid tumours of the lower jaw for four and seven years respectively. Besides these tumours, there was found after death a fibrous growth on the vertebræ and general bone disease, to which the fracture was obviously due. In the long bones the medullary tissue was red and yellow, whilst in the heads of the bones

were smooth lined cavities full of clear fluid, similar to those described by Mr. Solly in mollities ossium. The cortical part was thin and spongy. The question was whether the case came under the head of fragility of bones in connexion with malignant disease, or whether it was not true mollities ossium. He was inclined to the latter view. The structure of the tumours was that of large myeloid and spindle cells; the yellow parts of the altered medulla in the bones consisted of fat-cells and small round cells, the red portions having in addition some "myeloid cells" and a few elongated cell-forms. It might be that there was a general infiltration of the bones with tumour-tissue, to be distinguished from inflammatory tissue by its tendency to spread; and he recalled the fact that when the subject of osteitis deformans was discussed at the Royal Medical and Chirurgical Society, it was suggested that the diffuse bony change in that affection allied it to tumour-formation rather than inflammation.—Mr. WALSHAM inquired whether the characteristics of mollities ossium, as pointed out by Rindfleisch, had been found here. Was there any dilatation of the veins in the bone, or atrophic changes with wasting of bone-corpuscles in the outer layers of the bone? In his own examination of museum specimens he had been unable to find evidence of venous dilatation.—Dr. PYE-SMITH asked if the urine showed excess of phosphates or other abnormal characters.—Mr. BUTLIN replied that the patient only survived six days, and the condition of the bones was only ascertained after death.—Mr. ADAMS remembered examining the cases described by Mr. Solly, where the cavities in the head of the bones were of considerable size. He had no doubt as to this case being one of mollities, and it was interesting to find it associated with myeloid tumour.—Mr. BUTLIN had not observed any venous dilatations, and had not examined the bone microscopically before it had been softened by reagents.

Mr. ALBAN DORAN showed a specimen of Papilloma of the Fallopian Tube. The patient was unmarried and fifty years of age. Twenty months before the removal of the growth she had an attack of acute ovaritis on the right side. She was then under the care of Mr. Bickersteth, of Liverpool. Four months later she had an attack of pleurisy with effusion, which was treated by tapping. Then followed ascites, which also required paracentesis, and this had to be done twice; when a tumour was found in the right iliac fossa. The fluid from both pleura and peritoneum deposited masses of large vacuolating cells. Eventually Mr. Spencer Wells opened the abdomen, much ascitic fluid escaping, and removed a small tumour from the right iliac region. The ovary was quite separate from the mass, which proved to be a cauliflower-like papillomatous growth growing from the Fallopian tube, the fimbriate end of which was patent. The growth showed beautifully the early formation of cysts by the union of papillary offshoots (as first described by Wilson Fox in the case of ovarian cystic growths). But it did not invade deeper tissues, resembling rather a warty growth due to continued inflammation. Mr. Doran thought that the peritoneal and pleural effusions were both related to the presence of this tumour, conjecturing that the continued escape of fluid from the free end of the Fallopian tube kept up irritation of the peritoneal membrane. There had been no recurrence of the effusions since the operation, and Sir J. Fayrer had just informed him that the patient was now perfectly well.—Mr. KNOWSLEY THORNTON thought the case bore another interpretation. He suggested that the growth started from the broad ligament and invaded the Fallopian tube, in which case it would belong to the very numerous group of so-called parovarian cystic or papillomatous formations. He related the case of a patient who, at sixteen years of age, had a tumour of this kind, which was tapped when she was nineteen. At the age of twenty-one she married and the tumour reappeared; but she passed through twenty-six years of married life, bearing nine children, and having one abortion. Seven years after the birth of her last child she began to suffer from ascites, which recurred, the tumour being then of large size. It was removed, and was found to be of the nature described, and a pin-hole ulceration in the Fallopian tube communicated with the cyst. Probably in this way leakage had occurred into the peritoneum, and hence the effusion, which did not recur after the removal of the tumour. The complication of pleural effusion in Mr. Doran's case seemed to show that the pleura was infected, and that the growth was malignant, but it was at present impossible to draw the line of malignity in these growths.—Dr. DAY, who examined the patient before operation, believed that the pleural effusion, of which there was then slight evidence, had occurred by extension of inflammation from the peritoneum.—Mr. DORAN pointed out the remarkable limitation of the growth to the Fallopian tube, the broad ligament being merely thickened.

Dr. NORMAN MOORE exhibited specimens of Disease of both Suprarenal Capsules without Bronzing of Skin. 1. A man, of sallow complexion, twenty-five years of age, under Dr. Southey's care, with tubercular phthisis and much pleural effusion. Both suprarenals were enlarged and advanced in caseous degeneration. An interesting point in the case was that a diverticulum ilei had become adherent to the mesentery, and strangulated six inches of intestine. But this must have occurred quite recently, for there was no peritonitis. 2. This was a case in which both capsules were wholly infiltrated by new growth, secondary to an intrathoracic tumour. There was no bronzing of the skin.—Dr. COUPLAND inquired as to the condition of the abdominal sympathetic, which he thought must be considered essential to the production of the pigmentation as of the other phenomena of Addison's disease. He had met with caseous degeneration of the suprarenal capsule in phthisis without these phenomena marking the case. Cancer of the capsules, it had been abundantly shown, was not associated with these symptoms, probably because in that condition the nervous structures were not involved.—Dr. MOORE said that the first patient had been ill for three months. The semilunar ganglia were not examined in his case, but in the second case they showed no naked-eye change. He believed that Addison at first thought any disease of the capsules would produce the symptoms of the disease. He had brought the specimens as a contribution to a subject which was still *sub judice*.—Dr. COUPLAND hoped to have another opportunity of raising discussion upon the important connexion between nerve-changes and the characteristic symptoms of Addison's disease.—Dr. WILKS said that these cases did not contradict the present views of the nature of Addison's disease. It was shown by Addison himself, and since repeatedly by others, that the change in the capsules was idiopathic. It was a particular form of primary disease of the suprarenal capsules, and one could speak of it as confidently as one speaks of a disease of the kidney or other organ. It was a slow inflammatory change affecting those organs alone. It was not an accidental thing. An accidental deposit does not produce these symptoms. Then as regards the absence of bronzing, that had already been proved by Addison himself, and he too (Dr. Wilks) had noted its absence in undoubted cases of the disorder. He did not, and Addison did not, contend that these organs were essential to life. They might be destroyed for years, but the disease indirectly kills, probably through involvement of the sympathetic.—The PRESIDENT said that the degree of bronzing in any given case was probably related to the duration of illness

Dr. MOORE then exhibited a recent specimen of Intrathoracic Tumour, with Multiple Cerebral Growths, from a man twenty-five years of age. At first there was retraction of the left side of chest, which gradually gave way to bulging, and after death a large tumour filled the pleura, causing complete collapse of the lung. The growth apparently started from the base of the pericardium, forming a thick mass over the heart, which was displaced slightly to the right. The mass involved the mediastinal glands, but did not appear in the neck; nor did it invade the substance of the lung. In the brain were found several masses of new growth—viz., two in the posterior part of the left cerebral hemisphere, one in the thalamus, three or four in the posterior cerebellar lobe, and one, with softening, in the left frontal convolution; but there were no cerebral symptoms during life. Below the diaphragm the only change was that exhibited by both suprarenal capsules, which he had just shown (Case 2 *supra*). In reply to the President, he added that there was no ophthalmoscopic examination.—Dr. PYE-SMITH asked for the precise extent to which the third left frontal convolution was invaded. It had now been fairly well established that the anterior part of this convolution could be destroyed without any affection of speech being produced. But aphasia almost invariably followed disease of the posterior portion, that contiguous to the island of Reil and the corpus striatum, an area altogether not much greater than a large marble. It was important to remember that "Broca's convolution," so far as aphasia was concerned, was only a small portion of the third left frontal gyrus.—Dr. MOORE said that only the anterior part of the convolution was destroyed. In answer

to Dr. Robinson, he said that the microscopical characters of fresh portions of the growth showed them to be of the same nature in all parts.

Dr. LEGG showed a man who presented an instance of the Spontaneous Disappearance of Xanthelasma. In three years the xanthelasma, which was well marked in the palms and soles, on the elbows and nates, had altogether disappeared. In one of the earlier cases, spoken of by Addison and Gull, it is said that the patches disappeared, but it is doubtful if this were a case of xanthelasma; but in a case recorded by the late Dr. Frank Smith there was good evidence that the patches had really grown smaller. The present patient was under Dr. Legg's care in 1873 with moderately deep jaundice of three months' duration. There was no xanthelasma then. In August, 1876, he presented well-marked xanthelasma multiplex around the eyelids, in cleft of nates, on arms, hands, and sole of left foot. He was not seen again till quite lately—three years after last observation,—and Dr. Legg was surprised to find no trace of the patches on the body and limbs, whilst those on the eyelids were smaller. The fact of such disappearance told against the process being one of fatty degeneration, but rather one which would allow of a *restitutio ad integrum* of the cells of the subcutaneous connective tissue, as surmised by him five years ago.—Dr. PYE-SMITH said that in Dr. F. Smith's case the xanthelasmic tubercles disappeared whilst under observation. There was no question as to the change being a fatty degeneration (Kaposi, Fagge, Howse, &c.), but there was no reason against the débris being absorbed.—Dr. LEGG, of course, discriminated between "infiltration" and "degeneration."—Dr. POWELL inquired if the skin had entirely returned to the normal.—Mr. HOWSE contended that a microscopical examination of the skin which had been the seat of xanthelasma was necessary to complete the case; for the process itself was comparable to atheroma, and he could not conceive of it being wholly removed without leaving some permanent alteration behind.—The PRESIDENT asked for facts as to the patient's health during the period when the patches were disappearing. Xanthelasma multiplex was never seen without there being also patches on the eyelids. He had never known the patches on eyelids to disappear; and it was of interest that in Dr. Legg's case they still persisted, possibly without any change at all. There was no pathological reason why they should not disappear. In several cases in which patches had been excised from the eyelids they had not recurred.—Dr. CHURCH confirmed the fact that the skin which had been the seat of xanthelasma was now perfectly natural. He had observed cases in which there was no connexion with jaundice, and recorded in St. Bartholomew's Hospital Reports two instances of hereditary disposition to it, all the members of each family having it with the exception of one girl; and, curiously, she was the only one who was subject to sick headache.—The PRESIDENT said the conclusion he had come to was, that neither sick headache nor hepatic derangement was an invariable antecedent to the xanthelasma, which seemed determined by any state of ill-health which involved change in pigment. That day he had seen a well-marked case of xanthelasma palpebrarum in a married woman with a large family. She had large areas round the eyelids, but had not suffered from headaches since her youth, when, however, she was extremely delicate.—Dr. LEGG said that in his case the evolution of the xanthelasma ensued on jaundice, a few spots being noted on the eyelids six months after the patient came under observation. No facts could be learned as to the order of the disappearance of the patches.

Specimens without oral communication.

The following were exhibited, the President inviting criticism upon them:—

1. Congenital Hernia, with Undescended Testis. By Dr. Fred. Eves.
2. Syphilitic Disease of the Testes. By Dr. Fred. Eves.
3. Caries of Spine, implicating Hip-joint, and causing Distortion of Aorta. By Mr. Barker.
4. Syphilitic Disease of the Lung and Testes. By Mr. Hutchinson.
5. Gummata from a case of Inherited Syphilis. By Mr. Hutchinson.
6. Specimen of Alternating Calculus of Lithates and Lithic Acid, with a nucleus of Oxalate of Lime. By Mr. Hutchinson.

Each of these specimens was duly labeled, with a short description, and some were illustrated by drawings.

MEDICAL SOCIETY OF LONDON.

President's Address.—The Sphygmophone in Diagnosis.

THE opening meeting of the session of this Society was held on the 20th inst., Dr. Cockle, President, in the chair. There was a full attendance.

The PRESIDENT reminded the Fellows that as many valuable papers on Medicine and Surgery would be read during the session, he availed himself of the opportunity to offer a few remarks by way of supplement to his earlier address. He pointed out that if forced, as it were, by physiology to the investigation of mind, we quickly learn that the subject may be approached by metaphysical and psychological, as well as by physiological, routes. Metaphysics proper deal more especially with the mind in its progress and maturity. It is, however, with psychological physiology that we are more immediately concerned. Much has already been accomplished in this department, especially in relation to the senses, by applying the ordinary methods used in the natural sciences—namely, observation and experiment, involving at times considerations of number, measure, and weight. Progress has at present been but indirect, but there is reason to hope that much will be accomplished in the future by the more concerted action of observers. He mentioned that the earlier notion of extending the scope of psychology, and constituting it a sufficiently comprehensive science, by merging the unit into a sociological whole, was insisted upon by Herbart as far back as 1815, and that the views of later psychologists had fully justified Herbart's position. After showing, from Professor Huxley, that the ideas of ancient schools with reference to the action of matter on the senses was brought into curious apposition with the views of physiologists of the present day, he further alluded to the notions entertained with reference to the communion between mind and matter. He thought that certain difficulty might arise in this particular, as connected with the law of the conservation of energy, and showed how difficult, if not impossible, it was to discover the source of consciousness and volition. The origin and nature of life he considered still to be an open question. There is no knowledge of life as absolutely commencing, or as originated by art, or as dissociated from antecedent life. The various theories being largely dependent upon the mental bias of the proposer, all is conjecture, and likely to remain so unless and until we can by art construct protoplasm. Alluding to Mr. Darwin's theory in connexion with the evolution of mind, he thought the questions at issue were not yet finally settled between the transcendental school and that of experience; he suggested that it was desirable first to settle the question of Time, that of Space being too complicated, and better dealt with after the former is agreed upon. We must not be led astray by merely speculative arguments; questions concerning the divisibility of Matter and Space must be left with the physicists and geometers, and with them alone. If we would avoid verbal disputes we should always keep well in mind what is meant by physical necessity; and when we assert that a given consequent necessarily follows a given antecedent, all that is meant, or at least ought to be meant, is, that such sequence is observed so long as the laws we now recognise remain unchanged.

Dr. RICHARDSON, F.R.S., then read a paper on the Sphygmophone in Diagnosis. In the opening of his communication, Dr. Richardson explained the construction of the sphygmophone and the intention he had in view in constructing it. It consists of a battery, a Hughes microphone, a Pond's sphygmograph, and a telephone, so arranged that when the needle, which is moved by the pulse, traverses the microphone plate, which is made of some metal or of a layer of compressed carbon, the lines and curves made by the needle are rendered in sounds by the telephone. The sounds, which were demonstrated by Dr. Richardson, may be loud so as to be heard by large numbers of people, or reduced to a whisper which can only be heard when the telephone is applied to the ear, the intensity of the sound being regulated by the power of the galvanic battery. The sounds heard are three in number: one a long sound, corresponding with the ascending line of the sphyginographic tracing, and representing the percussion impulse from the

left ventricle, the first sound; another corresponding with the descending or slanting line of the tracing, the second sound; and a third, corresponding with the short ascending line of the tracing, caused by the closure of the aortic valves, the third or short sound. After describing the sounds that are produced when the sphygmophone is applied over the heart in order to get the cardiac movements, and after giving a brief account of his attempts (up to the present time only partially successful) to apply the apparatus for the purpose of recording the respiratory movements in sounds, Dr. Richardson dealt with the question of the use of the sphygmophone in diagnosis, the wrist-pulse being the part from which the pulsations are taken. In disease the three sounds ordinarily heard from the telephone are modified in various ways. In palpitation, during the paroxysm, the sounds are lost as three distinct sounds, and are replaced by a rotary sound as of a water-wheel in rapid motion. In cases of aortic deficiency with regurgitation, there is a fourth short sound, which is often extremely distinct and diagnostic. When there is increased ventricular impulse, the first sound is prolonged, and the second is either relatively or actually less pronounced, the weakness or strength of the succeeding fluid sound indicating whether the arterial tone is actually or only relatively lessened. Deficient power of the ventricle is indicated by shortness of the first sound, and true arterial relaxation by feebleness of the second and third sounds. Intermittency of the action of the heart is indicated in extreme cases by complete intervals of silence, but in less severe cases, where the patient is unconscious of the intermittency, there may be heard a series of very fine sounds or vibrations, as if the ventricle, though not making a full stroke, were still impelling the blood along the arterial course. In anæmia, in addition to the three ordinary sounds, there is often heard a gentle murmur; and in states in which anæmia is not a prominent symptom, this murmur is also occasionally detected. The signs thus described were illustrated by the author from cases, to the histories of which he referred under the different heads of his paper. He concluded by stating that, while he had no thought of suggesting that the sphygmophone should, in any way, interfere with the use of the sphygmograph, he felt that it was very useful for clinical teaching in class, and that from the readiness with which it could be employed it would be found useful likewise by the busy practitioner. When properly fitted up on the consulting-room table, it could be applied as easily almost as the finger in taking the pulse after a few weeks of practice.—No discussion followed the reading of the paper.

A unanimous vote of sympathy and condolence to Mrs. Leared on her recent loss was passed. It was moved by Dr. R. J. Lee, and seconded by Mr. R. B. Carter, the resolution being supported in some appropriate remarks by the President and Dr. Richardson.

The Society then adjourned.

HARVEIAN SOCIETY.

AT the meeting of this Society on October 17th, the President, H. C. Stewart, Esq., in the chair, Mr. ALDERSON exhibited a specimen of great Enlargement of the Heart. It came from a young man, a cab-driver, who drove from Cambridge to London in one day within a week of his death. He had been the subject of recognised heart disease for some time before his death. A double mitral murmur was heard in life; and on the post-mortem examination the mitral orifice was found narrowed, and also rigid, so as to permit of regurgitation. During the last few days of life, convulsions, with unconsciousness, were common. There was great enlargement of the ventricles, especially the left; and the aortic valves were just commencing in chronic valvulitis. The kidneys could not be examined. The heart was full of clots, and altogether weighed thirty-eight ounces.

Dr. MILNER FOTHERGILL read a paper on the Immediate and Permanent Treatment of Disease. He pointed out how in many cases the treatment which gives immediate relief is not that to be continued in the permanent interests of the patient. He instanced first the free use of opium in the hacking cough of phthisis and in chronic bronchitis, which gave immediate relief, but did harm eventually. Then in the diarrhœa due to impacted masses in the rectum, astringent mixtures might give immediate relief, but they were not curative, while removal of the masses was. So, too, in neuralgia the injection of morphia eased the pain for the time, but, if continued, was more likely to confirm it than to cure it. Likewise in dyspepsia, of reflex origin; it was all very well to give the ordinary mixture to relieve it, but its cure depended upon the removal of the exciting cause. In gout, too, the application of cold, or of leeches, gives instant relief; but he quoted Garrod in illustration of the evil consequences which follow such treatment. But of all instances of the conflict betwixt the present and the permanent treatment of disease, that furnished by endocarditis was, he said, the most striking. It was the rule to give tonics as soon as possible, and to get the patient up; but, he contended, the proper plan of treatment is to keep the patient flat in bed for some days after all evidence of active mischief has passed away. The growth of connective tissue in the valve-curtains, which is lighted up by the inflammatory storm that passes over the endocardium, persists some time after the endocarditis itself is over; and it is the mutilation caused by the contraction of the neoplasm which we have chiefly to dread. Consequently, the true line of practice is to reduce the strain upon the inflamed valve-curtains by complete rest, and the administration of agents which lower the blood-pressure within the heart and arteries. The more the connective tissue-growth could be limited at the outset, the less the future mutilation of the valves. A few days in bed are nothing compared to future valvular disease.

Reviews and Notices of Books.

The Student's Guide to the Diseases of Women. By ALFRED LEWIS GALABIN, M.A., M.D., F.R.C.P. London: J. & A. Churchill.

THE work which Dr. Galabin had done in obstetrics, and in other departments of medicine, made us open this volume with much higher expectations than those with which we would turn ordinarily to a student's guide; and in the main our expectations have not been disappointed, for although we shall have to point out what we regard as blemishes in the book, yet it is, for its size, the best and most complete work on the subject of which it treats. It is divided into twelve chapters; the first is devoted to Physical Diagnosis, the second to the Physiology of Menstruation, the twelfth to Functional and Symptomatic Disorders, and the remaining nine to groups of diseases, as malformations, new growths, displacements, &c.

The work is written in a terse and clear style, and is pleasant to read. Almost throughout it bears evidence of large reading, careful observation, and sound judgment, while in many places we cannot help observing marks of original work. This is especially the case in the parts of the book devoted to pathology and morbid anatomy. The chapter on Displacements, together with the first part of that on Diseases of the Ovaries (treating of malformations and atrophy of those organs), are the least satisfactory in the book. The first part of the chapter on displacements is devoted to versions and flexions, and the latter part to prolapsus and inversions. We believe the views adopted in the latter part are sound and trustworthy, while those in the former are, to say the least, rejected by many leading gynæcologists. In reading it we cannot quite make out whether the author is stating his own views, acquired as the result of observation and experience, or whether he writes as briefly as possible a sketch of the opinions entertained upon this subject. In any case, we think he has inserted too many drawings to illustrate pessaries, vaginal and intrauterine; while in recommending the use of the latter for the treatment of certain forms of anteflexion, he has magnified the importance of the affection, and tended to depreciate the danger of stems.

One other point we would call attention to, and that is the

treatment of imperfectly developed and atrophied ovaries, and of amenorrhœa. Dr. Galabin recommends for this the use of intrauterine stems, amongst other things. Now it is a well-established principle in medicine that, in the treatment of a condition which does not endanger life or cause grave inconvenience, no means should be adopted which may give rise to serious or fatal results. In many cases, if not in all (with the exception of those due to constitutional states), in which the above conditions are present, the inconvenience amounts to what may be called a "sentimental grievance," whilst the means proposed for their removal has, in many cases, proved fatal. In a second edition we trust Dr. Galabin will see his way to wipe off the above spots, and so make his book a still better and safer guide for the student of gynæcology.

Text-book of Physiology. By J. FULTON, M.D., M.R.C.S. Eng., Professor of Physiology in Trinity Medical College, Toronto. pp. 416. Toronto: Willing and Williamson. 1879.

THIS work, written by one who has been a teacher for many years, is a concise and sensibly-written account of the principal facts in physiology. The author, believing that histology is to physiology what anatomy is to medicine, has introduced an epitome of the microscopical features of the various tissues, which, with an introductory chapter on "Proximate Principles," occupies the first third of the book. The remainder is taken up with a consideration of physiology proper, which is discussed under the usual divisions of digestion, absorption, blood-circulation, respiration, animal heat, &c. The size of the work, of course, precludes anything more than an outline of the different functions, but this appears to us to be sufficiently clear and accurate.

It is difficult in a text-book to preserve a due proportion between the more and the less important subjects, but this Dr. Fulton has fairly succeeded in accomplishing, and we consider the work to be a good introduction to the larger treatises and to contain enough to render any student who thoroughly masters its contents a sound practitioner so far as practice is founded on a theoretical knowledge of physiology.

On the Traumatic Origin of Subfascial, Deep-seated, or Cold Abscess; commonly called Constitutional or Scrofulous Abscess. By LEWIS A. SAYRE, M.D. New York. 1879.

THE inaccurate title of this paper very fairly indicates the value of its contents. Cold abscesses are not always subfascial or deep-seated, and most certainly the converse is also true. Dr. Sayre advances the statement that "all deep-seated abscesses except specific and glandular enlargements will be found to be caused by a bruise, twist, or some other injury." In support of this are quoted six cases in his own practice, four of which are instances of necrosis of bone following injury, with abscess—a condition which we believe to be generally well recognised,—and two are given as instances of abscess following rupture of muscle. In one of these latter cases it was discovered "that the last digitation of the serratus magnus muscle at the eighth or ninth rib had been torn from its attachment"; however, as this muscle is not fixed to the ninth rib, and as it ought never to be a matter of doubt which rib is exposed in a wound, and as this discovery was only made after a very free opening of an abscess which had been forming for some months and had burrowed extensively, we must hesitate to accept evidence so obviously imperfect. No attempt is made to prove the truth of the opening statement in relation to psoas abscess, post-pharyngeal abscess, deep-seated abscess about the hip-joint in morbus coxæ, and many other everyday instances of this class of disease; and we hardly understand on what grounds the paper was held to be worthy of republication from the columns of the *Medical Record*.

OUR LIBRARY TABLE.

The Life and Work of St. Paul. By F. W. FARRAR, D.D., F.R.S., Canon of Westminster, and Chaplain in Ordinary to the Queen; Author of "The Life of Christ," &c. London: Cassell, Petter, Galpin & Co.—This treatise from the graceful pen of Canon Farrar, forms a fitting supplement to his "Life of Christ," which Messrs. Cassell have placed within reach of the general public. The volumes before us will be welcomed by students of Biblical history. The author has been animated by a purpose which is best expressed in his own words. "My chief object has been to give a definite, accurate, and intelligible impression of St. Paul's teaching; of the controversies in which he was engaged; of the circumstances which educed his statements of doctrine and practice; of the inmost heart of his theology in each of its phases; of his epistles as a whole, and of each epistle in particular as complete and perfect in itself. ..... I wish above all to make the epistles comprehensible and real. On this account I have constantly deviated from the English version. Of the merits of that version, its incomparable force and melody, it would be impossible to speak with too much reverence, and it only requires the removal of errors which were inevitable to the age in which it was executed to make it as nearly perfect as any work of man can be. But our very familiarity with it is often a barrier to our due understanding of many passages; for 'words,' it has been truly said, 'when often repeated, do ossify the very organs of intelligence.' My object in translating without reference to the honoured phrases of our English Bible has expressly been, not only to correct where correction was required, but also to brighten the edge of expressions which time has dulled, and to reproduce, as closely as possible, the exact force and form of the original, even in those roughnesses, turns of expression, and unfinished clauses which are rightly modified in versions intended for public reading. To aim in these renderings at rhythm or grace of style has been far from my intention. I have simply tried to adopt the best reading, to give its due force to each expression, tense, and particle, and to represent as exactly as is at all compatible with English idiom what St. Paul meant in the very way in which he said it." It is needless to say the task boldly attempted has been ably fulfilled.

Des Plaies en général, Pansements, et Soins divers. Par M. le Dr. BOENS. Bruxelles. 1878.—The principal object of M. Boëns appears to be to prove to the world that his beliefs in the matter of the healing of wounds have been by no means affected by the investigations and discoveries of late years. The evil influence of germs and bacteria is ridiculed, and we are told that it is the oxygen of the air that works the evil in wounds exposed to its influence. In one place we read of the "puerile minutiæ of Lister's process," and we are informed that they are "as complicated as they are useless." We need hardly quote any more.

General Index to the first Twenty-four Volumes of the Journal of Mental Science. By G. FIELDING BLANDFORD, M.D. London: Churchills. 1879.—The Medico-Psychological Association, and, indeed, all students of mental and nervous diseases, are to be congratulated on the compilation of an excellent general index to the first twenty-four volumes of the *Journal of Mental Science*. This admirable work is due to Dr. Fielding Blandford, who has signalised his year of office as president by the preparation and presentation of the index. The task must have been one of no small labour, for the index has evidently received the greatest care, and occupies a volume of 144 pages. It is preceded by a brief sketch of the Association by Dr. Hack Tuke.

CHARLES SMART ROY, M.D., has been elected to the George Henry Lewes Studentship.

THE LANCET.

LONDON: SATURDAY, OCTOBER 25, 1879.

IN the old days when, except for the purpose of making the grand tour or fighting the foes of their country, patriotic Englishmen were content to travel at home, and found the pastime sufficiently adventurous, there were fewer perils to health than those to which we are now exposed. Besides the small-pox and a select circle of epidemics—which from time to time invaded our shores and always found us, like true Englishmen, *un*prepared to meet them, or effected a firm footing in the midst of the population and refused to be ejected—there were not many forms of disease thoroughly domesticated amongst us. Since the opening of the Continent and the introduction of modern modes of transport, the conditions are wholly changed, and every year the community suffers the peril of sickness or death by disorders contracted abroad and brought home to us. We go out in quest of health and recreation, and we come home stricken by some malady caught in our travels, to suffer and perhaps to die. The conclusion is not that travelling should cease, but that, in so far as the presence of strangers in a foreign land is a source of profit to the inhabitants, their gains should be taxed to the extent necessary to secure the immunity of visitors, to at least the principal cities and towns on the Continent, from the preventable perils of disease. It would be unreasonable to blame the managers of hotels and the public or municipal authorities in places of general resort on the Continent for the dangers which must always lurk wherever large numbers of strangers congregate, but it is not unreasonable or too exacting to require that the French, German, and Italian communities which are benefited by the annual visit of English tourists, should abandon their filthy and insanitary habits of life so far as to render the latrines and the public watercourses of their towns no longer a common source of infection!

A recent deplorable event—the lamented death of Dr. LEARED—must, there is too much reason to fear, be attributed to this cause. It is grievously true that we live in a house of glass, and cannot throw stones at our neighbours in reproach for their systematic neglect of sanitary precautions without feeling how defective are our own arrangements, and how often it may happen that visitors to these shores take back with them the fatal seeds of disease which our provisions have failed to destroy! We cannot, however, plead guilty to the utter indifference to public health which seems to characterise the policy of municipal authorities generally on the Continent. The evil to which we now direct earnest attention is not the defective nature, but the absence, of precautions to prevent the spread of disease. It is impossible to cross over to Calais or Boulogne without in the course of a few hours encountering the most obvious perils from badly-planned and grossly-managed sewers and waterclosets; while the traveller who ventures to use the water provided for table purposes, or is so utterly reckless as to risk quenching his thirst with the contents of the bottle placed in his bedroom ostensibly for drinking purposes, might as lief tempt fate by taking poison. It is needless to urge that this is not as it should be. The evil has been repeatedly pointed out, and so far admitted that loud protestations of amendment have been promulgated to appease the anxieties of travellers. It is only fair to say that the pretence of improvement has been, generally speaking, as empty as the promise was in itself hollow when made. It is impossible to convince an average Frenchman, German, or Italian, that decomposing dirt is not fit to be included in the list of common and safe edibles. Any concession he may make to your remonstrance or entreaties on the subject of cleanliness is made with a shrug of the shoulders and a supercilious mien befitting the act of gratifying an innocent whim pressed by a lunatic on some more than usually amiable attendant. The citizen of the Continent cannot either comprehend or believe that sewage emanations are dangerous to health, or that a water-supply polluted by a leak from the neighbouring cesspool or culvert is not likely to be innocuous. He drinks it himself, and lives or dies contentedly. He would deem it an act of revolutionary disloyalty to remonstrate with his own rulers against a system which makes the avoidance of epidemic disease little short of a miracle.

It cannot be said that we are wantonly injuring the interests of foreign hotel-keepers by reviving this perennial topic of well-merited abuse for our friends across the "silver streak." The season of tours is nearly over, and those of our countrymen who have not returned must fain do so; but we earnestly caution them to avoid all except the best provided hotels, which are seldom the largest or most fashionable. If medical men, who must be assumed to be keenly alive to the peril of polluted latrines, and uncooked milk, and water laden with the germs of disease, cannot protect themselves and their families against infection, the difficulties encountered by the uninstructed must be yet greater. This is a matter to which it will be necessary to recur repeatedly, and in respect to which we must speak strongly and warmly until the authorities of the cities and towns frequented by tourists are aroused from their lethargy. Of remonstrating with the innkeepers, with whom it rests to take instant measures for the cure of this evil, we grow weary. They take our money, and for our lives they do not care.

THE subject of Fees is one that cannot be avoided. The court physician and the humblest general practitioner has to consider three things in reference to this subject: the dignity of medical service in general; the value of the particular service he has rendered in any given case; and the means of the patient. These three elements enter into the question of what is a proper charge in each case. As no individual case is exactly like another, either in nature or circumstances, it results that it is a difficult thing to name dogmatically a fee that should be charged. Notwithstanding this, it is very useful to have a standard or a tariff, by which to be partly guided. A very good standard of this sort has been published for some years past by the Manchester Medico-Ethical Association. This tariff has now reached a third edition, and we have pleasure in commending it to our readers. The charges are moderate

and reasonable, based on the rental of the patient's house. They are divided into four classes—(1) Where the rental is from £10 to £25; (2) from £25 to £50; (3) from £50 to £100; (4) above £100. It is urged with great propriety by the Association that in all cases medical men should base their title to remuneration not on *medicine*, but on the value of their time and skill. Ordinary visits are to be charged, in cases of the first class, 2*s.* 6*d.* to 3*s.* 6*d.*; of the second, 3*s.* 6*d.* to 5*s.*; of the third, 5*s.* to 7*s.* 6*d.*; of the fourth, 7*s.* 6*d.* to 10*s.* 6*d.* The table includes charges for special visits; for night visits; mileage beyond two miles from home; detention per hour or part of hour; advice at practitioner's house; letters of advice; consultations; attendance on servants; two or more patients in one house; midwifery (fees ranging from one guinea to five guineas and upwards); abortions; vaccination; surgical operations; and certificates. The fees recommended are certainly moderate, and in some instances perhaps too much so. We see no reason why the maximum fee for vaccination, well performed, should be 10*s.* 6*d.* Again, we do not see why a general practitioner, when a party to a consultation, should not receive at least a consultee's minimum fee, provided that is within the means of the patient. The tariff very modestly suggests that the general practitioner should charge in a consultation case only double his ordinary fee. If the scale is ever open to the charge of being impracticable, it is in its suggestions for payments for evidence in the superior courts. Thus, for evidence before the superior courts, or at quarter sessions, four guineas a day is to be charged by the general practitioner practising in the town, and ten guineas by a consultee; for attendance before a magistrate or a coroner two guineas are to be the charge of a practitioner, and five of a consultee. It is a pity to introduce suggestions which can only tantalise witnesses. But these are exceptional. As we have already said, the tariff generally is thoroughly reasonable and moderate. What commends it still more to ourselves is that it throws much personal responsibility upon practitioners of all classes for a proper use of their own discretion. It enjoins men of age and standing to hold high the value of medical service by raising their fees above those of the tariff; while at the same time it suggests to those who are called to attend the poor to consider their case, and to abate even the lowest charges in the scale if need be. It recommends in the latter case the taking of ready money or of monthly accounts, and in all cases, at the most, quarterly accounts. This is an admirable suggestion. Medical accounts would be paid much more frequently and much more cheerfully if they were sent in oftener, and nearer in point of time to the service to which they have relation. On all practitioners alike rests the responsibility of considering the dignity of the profession. It looks sometimes as if this were being forgotten by some men who append many letters to their name. They should regard the honour of the profession. They should remember that medicine is not a trade; that educated judgment is not to be bartered for sixpences, as if it were toothbrushes. These are the considerations which would tend to check the cheap systems of medicine which are vaunted on handbills spread broadcast, and complaints of which reach us every week. We quite agree with the Association in thinking that poverty needs to be accommodated in medical charges; but it must not bring medical service into contempt, and we think the Council cannot employ the interval between the present and the next edition of the tariff better than in considering what is the proper treatment of men who advertise themselves as ready to give advice and medicine for sums which cannot cover the cost of pure and necessary drugs.

THE subject of Obesity and its treatment has of late years received much attention both from doctors and their patients. The interest excited by the appearance of Mr. BANTING'S "Letter on Corpulence" will not be readily forgotten. The medicinal agents most commonly employed in the treatment of this condition are acids—chiefly in the form of lemon-juice and vinegar,—strong alkalies, and iodide of potassium. Of late, however, a preparation known as "anti-fat" has been extensively advertised, both in this country and in America, possessing, if we may accept the statements of the proprietors, very remarkable powers in removing that superabundance of fat which is so frequently a source of anxiety and discomfort to those who indulge too freely in the pleasures of the table. Anti-fat is said to be a fluid extract of Fucus vesiculosus, a common sea-weed, known in this country as sea-wrack or bladder-wrack, and in France as Chêne marin or Laitue marine. It is largely employed on the coasts of Scotland and France in the preparation of kelp; whilst in Ireland, curiously enough, it is found to be invaluable for fattening pigs. It contains, as might be expected, large quantities of iodine, chiefly, according to GAULTIER DE CLAUBRY, in the form of iodide of potassium.

Fucus vesiculosus was at one time officinal in the Dublin Pharmacopœia, and is by no means a new remedy. PLINY describes it under the name of Quercus marina, and says that it is useful for pains in the joints and limbs. In the eighteenth century it was largely employed by GAUBIUS, AUNEL, BASTER, and others, in the treatment of scrofula, bronchocele, and enlarged glands, and even for scirrhous tumours. Its charcoal, known as Æthiops vegetabilis, was used in the same class of cases. The fucus has also been found useful in skin diseases and asthma. On the discovery of iodine, in 1811, by COURTOIS, the saltpetre manufacturer of Paris, it for a time fell into disrepute. In the year 1862 its use was revived by Professor DUCHESNE-DUPARC, of Paris, who whilst using it experimentally in the treatment of psoriasis, found that it possessed the singular property of causing the absorption of fat.

The fucus can be taken either as an infusion, made by steeping half an ounce or a small handful in a pint of boiling water, or in the form of pill or liquid extract. The dose of the infusion is about a cupful, but it is so abominably nasty that few people can be induced to take it. The pills contain each three grains of the alcoholic extract; and, to begin with, one is taken in the morning, an hour at least before breakfast, and another in the evening, about three hours after dinner. The dose is increased by a pill a day, until the patient is taking ten every morning and evening. It is directed that the ten pills should be taken *dans la même séance*, and that a greater interval should not be allowed to elapse between each pill than is necessary for the process of deglutition. The fluid extract may be given in drachm doses, and it is said that the best results are

obtained when both the solid and liquid extracts are taken. In favourable cases the sufferer may expect a reduction in weight of from two to five pounds in the week. Unfortunately, however, the fucus appears to be somewhat tardy in its action, and the patient should lay in a good stock of the drug before commencing treatment. In successful cases one of the earliest effects is an excessive diuresis, and the urine is said to become covered with a film of a beautiful nacreous aspect. In one carefully recorded case the patient did not observe this, but noticed that his water was very high-coloured, and that its odour was extremely offensive. The next action of the drug is usually on the bowels, and the patient has many calls to relieve himself, without, however, being able to pass anything more than a little mucus. Sometimes the feet and body exhale a peculiar fusty smell, so that the patient is a nuisance both to himself and friends. After this, as a rule, the reduction in weight takes place. Occasionally, however, the opposite effect is produced, and the patient gets stouter than ever; in fact, fucus has been recommended as an "anti-lean."

By some authorities it is stated that the fucus should be gathered at the period of fructification, about the end of June, and that it ought to be rapidly dried in the sun; whilst other and equally eminent authorities insist that it should be gathered only in September, and that it should be allowed to dry slowly in the shade, a high temperature, according to them, destroying its active properties. It is generally agreed, however, that the roots and stalks should be rejected, and that the fucus gathered on the west coast is superior to that of the east. We understand that as a matter of fact most of our fucus comes from Billingsgate market, it being extensively employed for packing fish.

It must be confessed that we know little or nothing of the mode of action of this remarkable drug. We are told that it "stimulates the absorbents," but that is throwing very little light on the subject. What we want is a real sound systematic study of its uses and properties, both in the physiological laboratory and at the bedside. When it has been thoroughly and carefully worked out, as so many drugs have been of late years—pilocarpine and gelsemin, for example,—we shall be able to form an opinion as to its value, but at present we are quite in the dark.

THE statesman knows, and the reformer soon finds, that there are certain social evils which have to be accepted, and wherewith, after a wholesome rating for their wickedness, it is not only politic but indispensable to deal tenderly. The baby-farming business is probably of the number. There will always be children which must be provided for elsewhere than under their mothers' personal care; and the circumstance leaves no alternative except the existence of what are virtually baby-farms or a wholesale practice of infanticide. Not all the outpourings of eloquence at Exeter Hall can change the face of the facts. What, then, is to be done? We answer, Regulate the business, which you cannot eliminate from the list of industrial pursuits. Nursing the sick was at one period little better than the system of *neglect* now practised where "infants are taken in to nurse." Something has been done to improve the chances of adult life under the care of mercenary women, and further good may be effected if the reform of baby-farming is seriously attempted.

The first step, we venture to think, must be to pass an Act of Parliament making it illegal to place a child in the care of any person of either sex with a payment down for the support of the said child during an indefinite period, or a bonus accruing on its death. The interest of the baby-farmer should be bound up with the life of the infant. The object can be best obtained by making direct payments illegal. Perhaps the simplest plan would be to issue a regulation enabling any person to pay into a post-office savings-bank, either a sum not less than is sufficient to meet weekly payments extending over six months at a time, or smaller sums at shorter intervals, the office issuing in receipt a form bearing the name and age of the child to be put out to nurse, and a blank for the signature of the person having charge of the infant. This paper could be given with the child to the baby-farmer, who would present it at the nearest postal savings-bank in her district from time to time, and draw a specified sum *weekly*, signing her name in the proper place. The paper would thus become a record of the history of the case, and in the event of the child being transferred to new hands, the fact would be shown by the signature of the person receiving the money. Moreover there would be a virtual register created of all baby-farmers, and the authorities of each district could glean the facts they are often unable to ascertain at the district postal savings-bank.

It is essential to public safety that baby-farming should be carried on under official public inspection; and requiring that *all* payments, whether made by the parent weekly or in bulk, should be paid through a postal savings-bank, would secure the means of supervision it is needful to establish. The time has arrived when it is desirable to prepare a workable scheme for the consideration of Parliament, and we venture to submit that just sketched as supplying the nucleus of a suggestion. It would not be difficult to arrange a system of visits to these "farms," which exist in all localities and are of all grades, from the rank of places supposed to be suitable for the rearing of children whom it may be intended afterwards to claim, to those where infants are placed to die and thus efface, if they cannot atone, the sin of their parents. By making payment through a postal savings-bank indispensable, and so arranging, as we have suggested, that whether a lump sum be put down or the cost of maintenance met by instalments, the farmer shall always draw for a week only at one time, and sign for each payment, at an office near her residence, the business would, without hardship or exposure to the parents—who might make their payments anywhere, and in any name—be brought under proper control. We beg that it may be understood the parents could have no motive to evade the legal mode of payment. As regards the personal hold of the baby-farmer upon her employer, the matter would stand as it does at present; that is an affair with which the public has no immediate concern. When payments ceased, the fact would be known to the local officials, and the cause might be mentioned. On the death of a child the paper should be given to the registrar or the coroner's officer.

We shall be glad to see the suggestion discussed.

Annotations.

"Ne quid nimis."

CHOLERA AMONG BRITISH TROOPS IN BENGAL.

THE deaths of British soldiers in Bengal from cholera alone, during the year now drawing towards a close, will be a very heavy item in the vital expenditure dependent upon the campaigns in which our troops are still engaged in Afghanistan.

Up to the end of September last the death-roll of men alone amounted to very nearly six hundred, the number of attacks having been almost eight hundred. That this lamentable mortality among officers and men arose chiefly from the influences to which they were subjected on service may be inferred from the fact that the number of cases and deaths among women and children remaining in cantonments was comparatively very small. The proportion of deaths to cases is probably not much greater than has previously been observed under the comparatively much more favourable circumstances of an outbreak of cholera among troops in cantonments. It is difficult, however, to realise the actual wear and tear, both mental and physical, to which all concerned, but especially the medical officers, must have been subjected. The fact alone that out of the twelve officers who have died from cholera, medical officers furnished nearly half, indicates with sufficient force the class upon which the burthen and heat of the day fell with the greatest severity. The difficulties of transport, and the various exigencies inseparable from a contest with cholera, among troops moving through the arid, burning defiles and plains of Afghanistan, surrounded and harassed by hostile and warlike tribes, must surely have elicited the exhibition of many instances of devotion, zeal, and self-denial on the part of medical officers, which we hope may receive an early and full recognition from the military authorities in the shape of a fair share of those honours and rewards which at once gratify those who are lucky enough to survive to receive them, stimulate others to similar efforts, and furnish a graceful and consoling tribute to the memory of those who have fallen in the struggle.

THE SPHYGMOPHONE.

THE medical mind is naturally cautious in giving a verdict upon the utility or otherwise of any new invention. The lesson learnt by the cold neglect with which some discoveries have been met at first—e.g., that of the stethoscope—has been taken to heart, and the inventor nowadays is mostly listened to with attention. At first sight Richardson's sphygmophone does not seem to offer much that is of practical gain. It consists essentially in the rendering audible the sounds produced by the movement of the sphygmographic needle on the plate of a microphone. Dr. Richardson implied, in his remarks at the Medical Society of London, that these sounds indicated something more of the condition of the arterial flow than could be recorded by the sphygmograph or heard by the stethoscope. At present he is almost the only person (in this country at least) who has studied these sounds, which, curiously enough, do not correspond to all the elements of the sphygmographic curve. Consequently, at the close of his demonstration, none of the gentlemen present volunteered any criticism either for or against the value of the instrument. Dr. Richardson hopes that physicians will study the effects produced by it, contending that its application is simpler and easier, and its indications ampler than those of the sphygmograph. If the recommendation be followed, and a careful study made of the invention, we must wait until many have tried it before a final conclusion is arrived at. One or two obstacles seem to lie in the way of any wide application. One of these is the fact of its being a sound-record, and that of sounds of brief duration and difficult to fix in the mind. Dr. Richardson says that with the normal pulse he can distinguish three sounds: the first a long sound, corresponding to the systolic percussion wave; the second a long sound, corresponding to the aortic recoil; and the third a short sound—the valvular shock,—corresponding to the closure of the semilunar valves. Practice doubtless enables one to clearly discriminate these sounds, and detect variations in them; but differences of opinion as to their character were not unfrequent among the audience the other night.

THE PATHOLOGICAL SOCIETY.

THE new method for the exhibition of some specimens commenced at the last meeting of the Pathological Society, and promises to add considerably to the utility of the meetings. Several specimens of much interest were shown on the "silent" plan; but it was particularly urged by the President that criticisms were invited upon them as upon those which were described orally. Nor must it be thought that specimens shown by card are of less interest or importance than those described orally by the exhibitor. Often it may be otherwise, but the specimens shown on the new plan are such as can tell their own tale. Another decided improvement in the management of the meetings that follows upon the adoption of this plan is the regulation which calls upon all exhibitors of the evening to lay their specimens on the table half an hour before the chair is taken. It is to be hoped that this regulation will be fully encouraged and enforced.

OFFICIAL SANITARY REPORTS.

DR. BLAXALL, one of the medical inspectors of the Local Government Board, has recently presented to Dr. Seaton, the medical officer, a special report on the sanitary defects of Okehampton, in Devon, the inquiry having been held, at the request of a ratepayer, on the plea "that the provisions of the Public Health Act were inefficiently administered." The report is, comparatively speaking, very brief; but we must take leave to register a hope that few other towns in the fair county of Devon are in so miserably filthy a state as Okehampton. Its population is returned at 2000 persons, and there is no special industry except an artificial manure factory outside the town, which, by the way, is not credited with any nuisance at all. Good water exists from underground springs on Dartmoor, and is partially supplied to the inhabitants. But two dip-wells, both objectionable, are largely used, and much of the spring-water is spoilt because, when laid on to the closets for flushing purposes, there are in many cases no cisterns or intervening service-boxes, so that foul air, and even excrement, may be sucked up into the water-mains when the latter are empty. Excrement removal and disposal are accomplished by means of closets and privies. The soil-pipes are unventilated, and as regards the privies, all are of the most objectionable description, some being open pits, and others presenting appearances so grave as to suggest positive danger of immersion to those who use them. Some tenements have no latrine accommodation at all. As to the sewerage, four main channels discharge into the river, and the fifth on to a meadow for irrigation purposes; and certain drains from houses and closets go direct to the river. Few are constructed properly, many having no artificial base; blockage consequently is frequent. There is no system of ventilation except by some few street gullies, which are so offensive that most of them are now trapped, with the natural result of driving the foul air into the neighbouring houses. The salary of the medical officer of health, originally £8 yearly, has been increased to £16,

but the Local Government Board declines to pay the moiety, and it is safe to assume that the officer is practically appointed to do and report as little as possible. The authorities shielded themselves from blame by reminding Dr. Blaxall that the town has enjoyed a comparative immunity from dangerous infectious disease for many years. It is not necessary even to recapitulate the recommendations recorded by the inspector; but it is simply astounding that such an insanitary condition of things should exist in one of the fairest parts of the United Kingdom.

Mr. T. C. Langdon, of Winchester, and health officer for that urban district, was recently directed by the authorities at Whitehall to inquire generally into the condition of the rural sanitary district of Wells, which comprises an area of 54,616 acres, and a population of 12,000 persons, the area including fourteen entire parishes. One inspector of nuisances (with a salary of £100 a year) is expected to *walk* over this area (for he cannot afford to keep a horse), but he need not and does not attend official meetings, and so cannot confer with his chiefs. The sanitary business at the meetings of the board of guardians, which is in this case the health authority, is always "taken last," and so receives, comparatively speaking, little attention. Mr. Langdon summarised the generally sanitary condition of all these villages, from which it appears that the water-supply is, in some parts of the district, much contaminated, and in others liable to pollution from excremental and surface soakage. But the report is far too superficial to enable us to do more than refer very generally to its contents, which are brief, and simply indicate insanitary conditions that we might naturally expect to find in the vast majority of rural sanitary districts in which the health officers are poorly paid.

EXCISION OF THE RECTUM FOR CANCER.

AN article upon cancer of the rectum, especially with a view to its excision, is contributed to the New York *Archives of Medicine* by Dr. Lewis A. Stimson, one of the assistant editors. He points out that the removal of rectal cancer by the knife is not a new operation, but that it has heretofore been peculiarly dangerous, the subjects operated on dying from diffuse septic inflammation of the para-rectal and subperitoneal connective tissue. The liability to recurrence depends upon the extent to which the growth (nearly always of the type of cylindrical-celled epithelioma) has infiltrated the walls of the gut. Cases seldom come under notice until the disease has made considerable progress, and the natural barriers offered to its extension by the submucous and muscular layers of the bowel have been already passed. In three cases in which there was early local recurrence, the epithelial growth had invaded the muscular coat, and the adjacent connective tissue was dense and hard, whilst there was also lymphatic infection. In one of these cases he removed the recurrent mass, a lymphatic gland found on examination to be full of cylindrical epithelium. But in the two cases (out of the five personally operated upon) in which there was no recurrence nine months and thirteen months after the operation, microscopical examination showed that the epithelial new growth had extended through the whole thickness of the muscular coat. Although it is not quite clear as to whether he is a "constitutionalist" or "localist" in his views upon cancer, it is plain that the writer thinks there is no hard-and-fast line between a simple epithelial outgrowth and one of local malignancy. The former may pass into the latter by the lateral and deep extension of its elements. In speaking of the advantages of treatment, he admits that the "probable comfort of the patient and the period of his survival in case of non-interference, must be taken into account." But his cases do not afford sufficient data for a correct estimation of this, and it is important to note that four out of the nine cases he records succumbed with pyæmic symptoms a few days after operation. Three of these patients were, however, in a cachectic condition at the time. Of the other cases, two remained well and free from recurrence for thirteen and nine months respectively; one died from rapid return of the disease; and in two others the recurrent growths were removed once and twice, and then the cases ended fatally. So that these results are not very encouraging, and point to the great difficulty there is in the complete extirpation of the diseased part. Lister's method was employed on five occasions, one of the patients dying of peritonitis. Removal of the entire cylinder, including the anus, was done in five cases; *three* of the patients died of the operation, one remained well, and one had local return of the disease. Removal of the entire cylinder, not including the anus, was done three times in two cases—twice by the knife, once by ligature. Removal of only the affected portion was done in two cases: in one there was local recurrence; in the other the patient has remained well.

These cases have taught Dr. Stimson that "Volkmann's enthusiastic presentation of the advantages of extirpation of the rectum under antiseptic precautions is calculated to mislead surgeons, by inducing them to undertake it under circumstances which ought to clearly contraindicate it"; that when the circumference of the gut is involved in the disease, and the ulcerated surface is excavated, it is almost certain that the surrounding connective tissue and glands are involved, and that removal would be unsuccessful. For such cases colotomy is the only course. But flat raised tumours are slow to implicate the para-rectal tissue, and are the most favourable for excision. Between these are cases where relief may be gained for a time by excision, but recurrence is certain in a few months. Dr. Stimson urges necessity for not overlooking the existence of polypi or polypoid growths, which, if left, might be the starting-point of cancer. The methods of operation are described, and the paper—sensible and practical—concludes with records of the cases upon which it is based.

THE GENERAL LYING-IN HOSPITAL, YORK-ROAD.

THIS institution has lately been reopened after a period of closure amounting to nearly two years. Some time back the committee invited Professor De Chaumont to report on the sanitary condition of the building. Professor De Chaumont's reports are of great value, and we regret that the committee have not followed the example set by the committee of St. Mary's Hospital, by publishing them for the benefit of others. We are informed that various suggestions were made, and these suggestions have been carried out under the superintendence of Mr. Eassie, the well-known sanitary engineer. The drainage has been altered, so that at present no drains run beneath the building; the various waste-pipes have been disconnected, and a Field's patent flush tank has been placed upon the roof of the building, by means of which the sewers are automatically flushed, under enormous pressure, at least once in the twenty-four hours. This is a most important addition to the drainage system, and must, we should say, be productive of great good. It is needless to state that the drains and soil-pipes are all properly ventilated. The closets have been placed in projecting turrets, and fitted with Jennings' trapless closets and patent slop-sinks. The seats of the closets are of soft wood, painted, which we think is a mistake, since hard wood (mahogany or oak) has obvious advantages in being less absorbent. The chief improvement in the wards consists in reducing the number of beds from six to three, but even now the cubic space allotted to each bed is not by any means extravagant, although sufficient. Each ward has conical air-inlets near the floor, the outlets being the

fireplace, a special outlet in the chimney-breast, and a special outlet flue, which runs right through the building to the roof, having no connexion with any other ward. The floors have been paraffined on Langstaff's plan, and have thus been rendered waterproof. At present they are a little sticky. The walls are coated with washable paint, so that the wards can be readily and completely cleansed. The windows are of the ordinary kind, and a double row of hot-water pipes runs round the wall at the level of the skirting-board. The labour wards contain one bed each, and have the trivalve window, as adopted at the Middlesex Hospital; in other details they resemble the bigger wards. There are no ward sculleries, as at other hospitals, and the distance from the wards to the closets and sinks strikes us as being inconveniently great. In the basement is a disinfecting chamber on Fraser's plan, which is large enough to take mattresses, and it is intended that no mattress shall be used twice without being subjected to a disinfecting temperature. There is a dirty-linen shoot running through the building. On the top an additional floor has been added to provide sleeping accommodation for the pupil nurses and midwives. This accommodation is of the usual kind, and is not too well ventilated nor too roomy. The basement has been remodelled. Lastly, a corrugated iron dead-house has been erected; for, strange as it may seem, there was not any accommodation for the dead before the alterations, and a corpse was permitted to lie in the ward until removed by the friends. The committee are to be congratulated upon having done very much to improve this building, as much probably as could possibly be done, and we trust they will be rewarded by an absence of puerperal fever and allied troubles. The plan of the building is not that which would be adopted in the present day for a lying-in hospital, but if anything can compensate for an obsolete plan, the alterations which have been carried out (at a cost, we believe, of £5000) seem well calculated to do so.

MORTALITY STATISTICS OF SYDNEY.

MOST of our colonies now have a Registrar-General, and issue periodical returns of vital and mortal statistics. It is to be regretted, however, that the want of uniformity which robs the reports of our English medical officers of health of so much of their value, is still more conspicuous in our colonial returns. Australia contributes liberally in the way of statistical returns, but unfortunately the arrangement of the mortality statistics is not always such as to afford much clue to the sanitary condition of the populations to which they relate. We have before us the Registrar-General's report upon the vital statistics of Sydney during the quarter ending June last, and from it we have only after considerable trouble been able to derive any figures which afford a clue to the health of that city during the second quarter of this year. We can scarcely feel grateful to the Registrar-General (Mr. E. G. Ward) for telling us that the 530 deaths in the city during the quarter were equal to 0·69 per cent. of the population in 1871, or that they were equal to 0·70 per cent. in the registration districts forming the metropolitan division. In the first place it seems strange that the Australian Registrar-General should have no means for forming an approximate estimate of the present population of the city, which must be considerably greater than it was in 1871. In the second place, we would venture to remind him that throughout the civilised world rates of mortality are now almost invariably calculated as *annual* rates. This reduces all rates of mortality to one uniform standard, which renders them comparable, whether they relate to a week, a month, a quarter, or to a year. Mr. E. G. Ward, however, in the return before us, gives only the percentage of the recorded deaths to the total population, both in his monthly and his quarterly return, these percentages being perfectly useless for comparative purposes. If we take the trouble to analyse the facts we shall find (using the population enumerated in 1871 for want of an estimate for the middle of 1879) that the 530 deaths recorded in Sydney during the three months ending June last, were equal to an annual rate of 27·8 per 1000 of the population, which is given as 76,159. The birth-rate in the same period was equal to 49·5 per 1000, which may be taken as proof that the population is not very considerably understated. When we consider that the annual rate of mortality in 20 of the largest English towns during the same three months did not average more than 22·2 per 1000, the comparison does not place the sanitary condition of Sydney in a favourable light. It is a pity the Registrar-General does not present his statistics in a more intelligible form in order that the high death-rate might attract the local attention it deserves. We notice that six fatal cases of typhoid fever were recorded in the city during June, which is equal to an annual death-rate of one per 1000; this is four times as high as the average mortality from fever in the twenty large English towns. We may hope that this is an exceptionally bad return for Sydney.

ROYAL COLLEGE OF PHYSICIANS.

AN article in the current number of the *Quarterly Review* reminds us of an important but inadvertent omission on our part. A year ago Dr. Munk, the learned Harveian librarian of the Royal College of Physicians, produced a second and enlarged edition of his "Roll of the Royal College of Physicians;" and about the same time the late Dr. Willis' Life of Harvey was published by Messrs. Kegan Paul and Co. What we, through peculiar circumstances, had left undone, the *Quarterly Review* has been at some pains to do; and having sufficient space for an extended notice of these valuable works, it has, under the guise of a review, been able to present its readers with an entertaining and instructive account of the history of medical practice and practitioners for a period of more than 300 years—namely, from the foundation of the College in 1518 to the time of its removal from Warwick-court to its present situation in Pall Mall East in the year 1825. It must not be imagined that Dr. Munk's "Roll" is merely a series of pleasant gossiping, biographical sketches of the illustrious men who have made their college famous. It is a tolerably complete history of medical education and legislation of the time of which it treats. We need not remind our readers that Dr. Willis' "Life of William Harvey" was no convenient speculation, or hastily prepared compilation intended to fall in with the celebration of Harvey's tercentenary. It was the loving and earnest labour of Dr. Willis' life. More than thirty years ago Dr. Willis, in his edition of Harvey's Works, published by the Sydenham Society in 1847, proved himself a capable expositor of Harvey's character and work. And of the last biography it is sufficient praise to say that it is at once full, accurate, and impartial.

THE WATER-SUPPLY OF SHEFFIELD.

IT would appear that the successor of the late Dr. Griffiths, as medical officer of health to this important but somewhat unhealthy town, is determined to commence his career by showing the authorities their duties and responsibilities—at least as to the water-supply. It seems that the land round the reservoirs of the Water Company at Sheffield has lately been sold for building purposes, and Dr. Hime, the health officer, points out the necessity of taking all possible precautions with reference to the construction of sewers &c., which will now be almost in juxtaposition with the reservoirs, and, as we suppose, in many cases on a level with, if not above, them. Indeed an accident has already occurred showing that these fears are well founded, for a sewer formed of

earthenware pipes leading from some neighbouring houses had become disjointed and broken, and the fluid escaping therefrom—found, of course, to be sewage—had percolated through the ground down to the steep grassy slope above the water in the reservoirs. In spite of the remonstrance of Dr. Hime, earthenware instead of iron pipes were again put in; and the officer of the Water Company, in the course of correspondence on the subject, says: "It may perhaps remove Dr. Hime's groundless apprehensions to be told that Misfortune Dam [rightly named, we may pause to say] has for a long time contained, and does now contain, *a large quantity of very fine fish, which certainly would not exist in tainted water.*" The italics are our own, for if the writer, when he next pays an official visit to the Local Government Board, will cross to the river side of Whitehall and make his way to Charing-cross pier, he will in the morning see "a large quantity of very fine fish" (fine, at all events, in Mr. Frank Buckland's eyes), although the Port Sanitary Authority of London has just informed the public that, in spite of the metropolitan main drainage scheme, no less than 327 foul outfalls still discharge into the Thames. Sheffield seems to be one of the places determined to oppose sanitary reform to the uttermost, and we cannot envy the position of a conscientious officer whose path of duty is so persistently obstructed by such pitiful and obstinate cheese-paring.

SURGEONS TO IRISH PRISONS.

A DEPUTATION of surgeons connected with gaols in Ireland had an interview last week with the Chief Secretary for Ireland, for the purpose of ascertaining if the question of remuneration to the prison surgeons for increased duties imposed on them would be reconsidered by the Government. Having stated their case and detailed the grievances under which they labour, they were informed that a departmental committee would be appointed to consider each individual case and report on the subject; but that, as regarded the difficulty about the medical officers making up the necessary medicines, it was probable that the duties of compounding would have to be discharged by them. Increased duties have been placed upon these gentlemen: for example, instead of two visits a week, as formerly, and to attend prisoners when sick, they are now obliged to visit every prisoner within twenty-four hours of his admission, and again before being discharged; also every patient in hospital daily, and every prisoner previous to being placed in confinement, besides inspecting the diet. In view of these additional duties, it is only fair that the salaries of the medical officers of prisons in Ireland should be increased; but we are not very sanguine that the Government will accede to their request without considerable delay.

ENTRIES AT THE MEDICAL SCHOOLS.

THE following are, we believe, the correct returns of the new entries at the English Medical Schools. St. Bartholomew's heads the list with 134 full entries, 2 dental students, and 20 for special courses. We have been unable to learn how many of the 134 are beginning their *bonâ fide* medical studies, and how many are at present studying science. Next on the list is University College, with a total of 150, of whom 51 are studying science. The return from Guy's is 103 full entries, and 12 for special courses; London Hospital 106 in all, no particulars given: St. Thomas's, 46 full entries and 41 partial; King's, 56 full, 12 partial; St. George's, 46 full, 5 partial; Middlesex, 38 full, 5 partial, and 13 dental students; Charing-cross, 34 full, 6 partial; Westminster, 23 full, 8 partial, and 1 for dental diploma; St. Mary's, 27 full, 5 partial. Of the Provincial Schools, Durham University has the largest entry, 24 full, 27 partial, for degree only; Leeds, 39 full, 2 partial; Queen's College, Birmingham, 29 full, 4 partial; Liverpool, 27 full, 4 partial, 1 for dental diploma; Bristol, 17 full, 1 partial. Total 962. The entries at the large schools are about the same as last year, with the exception of University College, which reports a considerable increase. Of the smaller schools, the most notable change is at Westminster Hospital, where the full entries are nearly double those of last year. The improved state of the Bristol School is evidently recognised, as its entry shows a notable increase on that of last year.

MILK AND DIPHTHERIA.

MR. E. L. JACOB, medical officer of health for the Surrey United Sanitary District, in his annual return for 1878 to the Epsom authority, shows pretty clearly that milk was the cause of a severe epidemic of diphtheria that occurred at Leatherhead, commencing in January, and persisting, as it appears, to November. There were altogether 55 cases in 36 houses, and 5 deaths; 18 were adults, of whom 2 died, and 37 children, of whom 3 died. The infected houses were situated in all parts of the village, and in every variety of soil. Each had its own well, and about half drained into separate cesspools. Schools played no conspicuous part in the epidemic. Out of about 530 inhabited houses that exist in the parish, 280 were supplied with milk from *one* dairy-farm, whereas the others were supplied from other sources. Thirty families had suffered from the disease up to the end of September, and 29 of these were using the milk, one being supplied from a private dairy. It appeared, therefore, that of the 280 households supplied from the farm, 102·5 per 1000 were attacked. Mr. Jacob, from whose very concise report the above remarks are almost exclusively taken, says:—"Upon visiting the farm, I could not ascertain that any of those employed in the cowsheds or dairy had had any throat illness before or during the epidemic. All the cows were, and had long been, in good health. The water in use at the dairy was derived from a soft-water tank, and had at times smelt offensively. (A large quantity of black deposit was removed from the bottom of the tank when it was emptied on September 30th.) The pipe from the sink, at which the milk-cans were cleansed, was not properly trapped and disconnected, but no bad smells had been detected from it." But, unfortunately, Mr. Jacob tells us that he cannot say "how the milk had become polluted or infected." So far the inquiry is manifestly imperfect, although the complete way in which the one-portal system of infection is here traced out is remarkably concise, and very creditable to the industry of the officers engaged in the business.

SYPHILIS IN RUSSIA.

La Médecine Contemporaine gives a *résumé* of a communication made on this subject at the Medical Congress of Montpellier. Syphilis, says Dr. Podolinski, is the principal scourge of the rural populations of nearly all Russia, but its ravages are greatest in the South, in the Governments of Kiew, Poltava, and Theringnon. In some of the villages a third of the inhabitants are contaminated. In Taroslawka, of 120 families, 30 are certainly syphilitic, and 64 only are *known* to be healthy. The influence of the disease on the degeneration of the population, and the increase of mortality, is very great. There is scarcely an example of a member of an infected family having passed the age of sixty, and the death-rate among the syphilitic is more than one-half greater than that of the remaining population. Heredity and marriage are the principal means of its propagation, but special causes exist in the South, and chiefly in the Government of Kiew. In this province there are numerous beet-root plantations and manufactories of sugar, but the number of workmen being insufficient, the employers seek to promote the increase of the population artificially. For this

purpose spirits are freely distributed to the young adults, music provided several times daily for their entertainment, and every opportunity afforded for unrestrained intercourse of the sexes. The villagers, unable to resist these attractions, leave their families for the plantations. Girls who have passed a season at the "beet-roots" cannot be kept at home. The regular life of their families becomes intolerable to them. As soon as the musicians come by in their triumphal cars, drawn by four magnificent horses, the wise exhortations of parents are forgotten, and they allow themselves to be carried off—to return only at the end of the season, tired, demoralised, and diseased.

LAW AND THE EXPOSURE OF INFECTIOUS DISEASES.

THE thoughtlessness with which the parents of children affected with whooping-cough or scarlet fever expose them, to the great risk of other children, in churches, schools, and railway carriages can only be realised by medical men, who see the results. This exposure is so frequent, and so disastrous in its consequences, that the law which forbids it should be most rigorously applied. We are always glad when we receive reports of such a course on the part of sanitary authorities. The vestry of St. Pancras has just earned the gratitude of its constituents by doing so. They have summoned a person before the Clerkenwell police-court for taking his child home on the Metropolitan Railway after being informed at University College Hospital that it had scarlet fever, and after Dr. Pollard had offered to remove the child to the Fever Hospital in an ambulance. Mr. Barstow considered the case a very bad one, and fined the defendant 40s. and costs. The defendant's child died—a circumstance which, while it moderates our disposition to prolong our criticism, will the more impress on his mind the serious nature of the disease he was so carelessly carrying about in railway carriages. We trust that all medical officers of health will imitate Mr. Shirley Murphy in instigating their sanitary authorities to prosecute rigorously in such cases. We want a few good prosecutions of cases of whooping-cough exposure. The way in which the "whoop" is heard in churches and in omnibuses shows a want of vigilance on the part of inspectors of nuisances.

SUBPLEURAL ECCHYMOSES.

THE medico-legal value of subpleural extravasations of blood has long been insisted on. They form often one of the most trustworthy indications of death by asphyxia. But it would be absurd to imagine that these are the only conditions in which they are met with, and M. Parrot does well to remind us of the fact (albeit not a novel one) of their occurrence in cases of broncho-pneumonia in children. Writing in the current number of the *Revue Mensuelle* he says that in 1878 he met with forty-two cases of broncho-pulmonary disease in children, in which these ecchymoses were met with. In thirty-six of these cases there was pleurisy also, often limited to the region of the extravasation. Twenty-nine of the cases were of broncho-pneumonia, some associated with tubercle; in four cases there was extensive atelectasis, without pleurisy or pneumonia, but in three of them with well-marked bronchitis; and in one case there was pulmonary emphysema. In one case only did the ecchymoses constitute the only morbid condition, but he thinks that here some evidence of bronchitis might have been found if sought for. He gives an accurate description of the appearance and position of the extravasations, noticing that it is only when they are of large size that the pleura is at all raised, and he ingeniously explains their greater preponderance on (and, in some cases, limitation to) the right side, by the fact that the decubitus of children is mostly to that side. M. Parrot had met with only one instance in a child under one year of age. The cases comprised 30 of measles, 14 of diphtheria, 6 of hereditary syphilis, 1 of scarlet fever, and 1 of "gangrenous phlegmon." Two of the diphtheritic cases were laryngeal; and, moreover, some of the measles cases were complicated with diphtheria. The cases of syphilis comprised those which succumbed to pulmonary affections, some being tubercular. His conclusions are—1st. That subpleural ecchymoses are very frequent, if not common, in children dying from pleural and pulmonary affections complicating measles, and diphtheria. 2nd. That they are met with nearly exclusively in subjects over one year of age, a single exception to this being an infant of eight months. 3rd. That these ecchymoses due to morbid conditions differ from those which have a medico-legal significance in the constant existence in the former of an acute inflammatory change in the pleura overlying them, and often in the lung. To this we may add that, had M. Parrot extended his observation over a wider range, he would have found how common it was to meet with these appearances in adults dying from various diseases. But, as a general rule, the presence of the ecchymoses in question is related to obstructed entrance of air into the lungs, and they can often only be regarded as having a bearing upon the mode of death. They are, in other words, "agonic" phenomena.

OCCUPATIONAL MORTALITY.

THERE is no branch of vital statistics more pregnant with useful interest than that which deals with the influence of occupation upon health and disease. Unfortunately, however, the statistical difficulties which beset such an inquiry are so great that our knowledge upon the subject is exceedingly slight, and the necessary materials for increasing that knowledge are not yet available. The public interest in the subject, however, is so great that we need scarcely be surprised to find that many futile attempts to arrive at conclusions as to the rates of mortality incident to different occupations are frequently made. The most usual and the most deceptive basis upon which these conclusions are formed is the mean age at death of persons engaged in different occupations. It is much to be regretted that this method is not as trustworthy as it is simple. The mean age at death of persons engaged in occupations mainly followed by young persons is bound to be low. Thus, judged by this standard, the occupations of domestic servants, shop assistants, shoeblacks, &c., would be pronounced decidedly unhealthy; whereas that of bishops, judges, and generals would, by the same standard, be pronounced exceedingly healthy. All calculations based upon the age at death, without reference to the ages of the living among whom the deaths occur, are inevitably fallacious. Many columns of the *Pharmaceutical Journal* have recently been devoted to correspondence upon the supposed unhealthiness of the occupation of chemists and druggists, based upon random assertions as to the mean age at death of certain numbers of persons engaged in that business. The subject is full of interest, and is worth discussion, but no facts have yet been stated which afford the slightest ground for any trustworthy assertion as to the healthiness or unhealthiness of the occupation. The register of the Pharmaceutical Society, if the age of the members be recorded therein, would supply the necessary basis of facts for determining the point. If the ages of the members, arranged in quinquennial groups, could be ascertained, and also the deaths of members during a period of five years, arranged in similar groups of ages, then the true death-rate of the occupation could be calculated and compared with the death-rate of males engaged in other occupations. Such information would be valuable and interesting to others, as well as to chemists and druggists.

MEDICAL OFFICERS OF HEALTH AND INFANT MORTALITY.

AT a recent meeting of the Yorkshire Association of Medical Officers of Health, held at Bradford, a paper was read by Mr. Harris Butterfield, the medical officer of health for that borough, on "Infantile Diarrhœa," which also dealt with the more general question of infant mortality. Excessive infant mortality is one of those sanitary difficulties which medical officers of health so often find themselves almost helpless to cope with. It is satisfactory to note, however, that the subject is continually engaging the attention of the most energetic of our health officers, and if Mr. Butterfield's paper did not add much to our knowledge of the subject, some of his experiences with reference to infant mortality in back-to-back houses, which abound in Bradford, are not without interest, especially as Bradford is one of those manufacturing towns in which infant mortality is habitually excessive. After the reading of the paper, a special committee of the Association was, on the motion of the President (Mr. S. N. North, of York), formed for the full consideration of the subject.

HEALTH OF KENSINGTON.

THE annual report of this district, compiled by Dr. Orme Dudfield, the medical officer of health, has recently appeared in print, one of the interesting topics discussed being Fulham Hospital, and the way in which it has influenced, for good or ill, the hygiene of the district in which it is situated. This is a subject that has received considerable attention in these columns. The report deals with a variety of interesting matter, which we have no space to particularise, notably that relating to the ambulance service, the prevention of the spread of infectious diseases, hospital accommodation for our pauper infectious sick, &c. An important paragraph on an outbreak of glanders must be reserved for a separate notice.

CRIMPING FISH.

THERE would seem to be some misapprehension as to the purpose of crimping fish. It is not done solely to produce contraction of the muscles, or it might, as some writers have suggested, be deferred until after death—in fact, any time before the rigor mortis subsides. The primary purpose, however, is to let the blood escape, and this cannot be accomplished unless the fish is in some way cut during life, so as to bleed. Whether the measures taken to effect this object is cruel may be an open question, on a level with the skinning of eels alive, and, perhaps, the eating of live oysters. Boiling lobsters, crabs, and crayfish is a more savage mode of preparing fish for food than crimping, but no one takes up the cudgels for the poor creatures done to death by what may be hideous torture. The question as to the expediency of crimping salmon, cod, and turbot is chiefly one of bleeding to death, instead of simply allowing the fish to die slowly from the deprivation of oxygen, which, in the case of warm-blooded animals, we call "suffocation."

MEDICAL REGISTRATION.

OUR readers will see in our advertising columns important notices from the Registrar of the General Medical Council. The Medical Council has the power to strike out the names of persons whose addresses it seeks to verify, but who do not respond to communications from the Registrar, in consequence of changes in their address which have not been intimated to him. Every person so struck out of the Register for the time being loses his professional powers and rights. At least he loses the power of asserting them against unprincipled or ungrateful patients in courts of law. He cannot sign a vaccination certificate, and is apt in various ways to be inconvenienced. All this would be saved by an intimation of the change of address to the Registrar. It is in the power of all registered persons thus to add to the accuracy of the Register as well as to save themselves and the Council great trouble. We gladly direct attention to the Registrar's important notices.

CRUELTY ON BOARD SHIP.

IT seems that, in spite of all preventive legislation, acts of cruelty are still committed at sea. A sailor recently arrived at a boarding-house, having come from America in a steamship. He was, to use his own expression, starved all the way across, and was turned off out of his berth directly the vessel arrived in dock. The "sick man's diet," ordered by the captain, appears to have consisted of sago, which was the only medical comfort procurable on board. The captain declared at Gravesend that "all were well," and so none of the Customs officers seem to have known anything about the sick man's condition between Gravesend and the docks. It appears to us that some grave omission frequently occurs in the replies given to these Customs officers' questions, and that the Government officials are in many instances most egregiously misled. No time should therefore be lost in devising some simple remedy for this very unsatisfactory state of things.

MEDICAL APPOINTMENTS IN GLASGOW.

OUR Glasgow correspondent writes:—Dr. Fleming's death has necessitated the appointment in his stead of a medical adviser to the Scottish Amicable Insurance Company, whose head office is in Glasgow. Considerable interest was excited, as a keen canvass was instituted by the friends of many of the candidates. Dr. Leishman was the fortunate man, and, although some are disappointed, yet the great majority of the profession hail the announcement with satisfaction, for no man is more popular than the genial professor of midwifery.

Dr. Barr, aurist to the Western Infirmary, has been selected, out of five candidates, as aural lecturer to Anderson's College. Out of eighty-one trustees, it is understood that sixty recorded their votes, thus showing the vigorous efforts made to secure the election.

HEALTH OF THE BRITISH AND NATIVE TROOPS IN AFGHANISTAN.

FROM latest accounts we learn that at Lundi Kotal the general health of British troops was good, about 5 per cent. remaining in hospital, while that of the native troops was indifferent, more than 12 per cent. of the latter remaining in hospital. At Ali Musjid, of about 1200 native troops, 800 were remaining in hospital, or 66 per cent.; the general health was very bad, but had slightly improved. At Jumrood, about 15 per cent. of the native troops were remaining in hospital; general health indifferent. Her Majesty's 9th Foot, detained near Jumrood by cholera, had been ordered to move towards Bara Fort.

PSEUDO-HYPERTROPHIC PARALYSIS.

A CASE of this rare disease was exhibited by M. Dally at the Paris Therapeutical Society on the 8th inst. The symptoms, which coincide closely with the description given by Duchenne, were: muscular weakness beginning in the inferior extremities and the lumbo-spinal muscles, extending progressively, and finally affecting the upper extremities also; progressive increase in volume of most of the paresic muscles; hyperplasia of the interstitial connective tissue of the affected muscles, and the abundant production either of fibrous or of adipose tissue as the malady increased. According to M. Dally, only thirteen observations of this nature are on record.

AT the banquet given by the officers of H.M.S. *Excellent* at Portsmouth, on Tuesday last, to the officers of the Naval Brigade lately returned from the Zulu war, the commander of that ship, in an eloquent and lengthened speech, warmly extolled the services of the Medical Department of the Brigade; and the toast was drunk with enthusiasm—"The Medical Officers of the Naval Brigade," coupled with the name of Fleet-Surgeon Norbury, principal medical officer. Fleet-Surgeon Norbury delivered a suitable response, expatiating in particular on the difficulties experienced at Fort Ekowe; and thanking the officers present for the cordial way in which they had drunk the health of himself and his brother officers. This cannot but prove gratifying to the numerous medical officers lately serving in Zululand, as well as to the profession in general.

OUR advertising columns to-day contain the new Bye-laws and Regulations issued under the provisions of the supplemental Charter of December, 1878, granted to the King and Queen's College of Physicians in Ireland; with the conditions under which candidates who were admitted licentiates of the College before December 12th, 1878, may be admitted members of the College.

LAST week the members of the Wanderers' Club, Pall-mall, had a dinner to do honour to their fellow-member, Major Chard, R.E., V.C., and Surgeon-Major Reynolds, V.C., in recognition of their gallant conduct at Rorke's Drift. The chair was taken by Lord Headley, and the reception given to the two guests of the evening was most enthusiastic.

DR. SAMUEL WILKS has been appointed Physician in Ordinary to their Royal Highnesses the Duke and Duchess of Connaught.

WE are glad to see that Dr. Coupland's Introductory Address at Middlesex Hospital has been printed.

New Inventions.

A NEW STEAM-SPRAY PRODUCER.

WHATEVER uncertainty there may be in fixing the particular age in which steam-power was first intelligently appreciated, there can be little doubt that its introduction into practical surgery is confined to the latter half of this century. Whether the credit of utilising the expansive force of aqueous vapour belong to Hero of Alexandria, or to Don Blasco de Garay of Barcelona, or to G. Battista Porta of Naples, or to Salomon de Caus of Paris, or to our countryman, Henry Somerset, Marquis of Worcester, it is no part of our present purpose to attempt to decide. It is enough for us to know that it is to the doctrine of the germ-origin of certain pathological conditions we must ascribe the employment of antisepticised steam-spray in surgical operations. Papin, Savery, Newcomen, Cawley, Watt, and others may one and all have had a larger or smaller share in the invention and perfection of the steam-engine, but to Mr. Lister's efforts alone we must ascribe almost all of whatever credit there may be of placing it among the weapons of defence in the surgeon's *armamentarium*.

It would appear that no sooner had Mr. Lister convinced himself of the constant and all-pervading presence of septic germs in the atmosphere than he began to think of devising means of protecting wounds from their alleged malignant and pestiferous influence. To attempt to get rid of them altogether by excluding the air was, on the face of it, as hopeless a task as to try to undo the Gordian knot. The next best thing was to purify the air. This was most effectually to be accomplished by charging the atmosphere bathing the wound with minute particles of carbolic acid in the form of fine spray; hence a good trustworthy spray-producer became a desideratum. Consequently the energies of Mr. Lister and many of his disciples seem to have been devoted to excogitating the best possible form. In these efforts they have been zealously, aye joyfully, supported and encouraged by inventors and manufacturers of all kinds. Indeed, the political economy aspect of the "antiseptic system" is almost as important as its surgical and pathological. To say nothing of the innumerable preparations of carbolic acid, and other disinfectants and antiseptics now in the market, the demand for catgut, paraffin, resin, muslin gauze, oiled silk, and all the other paraphernalia of the antiseptic dressings, has been enormously increased. Consider, too, the stimulus given to the manufacture of steam-spray producers! Scarcely a month passes without leaving one of these miniature steam-engines behind.

Messrs. Matthews Brothers, of Carey-street, W.C., have recently called our attention to several specimens of a new steam spray-producer, manufactured by them. After some tolerably severe trials we are justified in pronouncing them among the most successful achievements in this direction with which we are acquainted. The accompanying engraving

will enable the reader to form some idea of the shape and general construction of these machines, but the following features deserve special notice. We must, however, first remark that it has hitherto been too common a practice to regard a steam spray-producer as an innocent sort of toy. This is a mistake, and is calculated to lead to gravest dangers. It should never be forgotten that the steam spray-producer, worked as it is under high pressure, is to all intents and purposes a powerful steam-engine, and should therefore be made of adequate strength and handled with becoming care. The strength Messrs. Matthews assure us they have supplied, but the necessary amount of care and intelligence they leave the surgeon to provide. The boilers, then, are made of stout, well-hammered copper, and are brazed, so that they are not only stronger and tougher than boilers with cast or sheet metal, but there is no solder to melt should the lamp be inadvertently applied while the boiler is empty. The boilers, moreover, are globular, and are thereby better adapted to resist high pressures, and expose a greater surface to the flame, which licks, as it were, round the spherical bottom and sides of the boiler. The larger ones are supplied with the lever and weight safety-valve, the shank of the lever being marked so that by adjusting the weight the apparatus may be worked at a known pressure.

It may be remarked, in passing, that the highest pressure attainable is alleged to be much below that to which the boilers have been submitted by hydraulic pressure. The circular wick of the spirit-lamp is extremely simple, and gives a large hot flame. By means of a tube worked by a rack-movement the amount of flame can be easily regulated, and when the apparatus is not in use the flame may be reduced to a minimum. The lamp itself fits into a thick wooden stand, which prevents the adjacent metal from becoming unduly heated. The feeding-hole of the boiler is firmly closed by a powerful screw carrying a nut of sheet-lead.

If we were disposed to find any fault with these elegant machines, we should object to the absence of any device, such as the whistle, or the balance-float, or the ordinary pane of glass, to ascertain the amount of water in the boiler. It is only right, however, to add that the makers have deliberately omitted any such contrivance.

THE THERMHYDRIC VENTILATING HOT WATER OPEN FIRE-GRATE.

(H. SAXON SNELL'S PATENT.)

THIS invention, carried out by Messrs. Potter & Sons, of 298, Oxford-street, consists of an open fire-grate surrounded on three sides and on top by a wrought-iron chamber containing water, which, when warmed by the fire, circulates through upright coils of pipes placed on either side. The hearth is made of iron, and the whole space below the grate and pipes is formed into a chamber for the admission and collection of air from the outside. The outer fresh air thus admitted passes upwards, and, impinging against the sides of the hot-water chamber and pipes, becomes thoroughly heated, without being burnt, before entering the room. The advantages claimed for the grate are, that the air cannot be burnt or be heated above the temperature of boiling water, and that the water contained in a vase surmounting the apparatus, being slightly warmed, evaporates, and thus keeps the air of the room moist.

IMPROVED PATENT "DUPLEX" LID AND AUTOMATIC FLUSHER.

(H. SAXON SNELL'S PATENT.)

THE object of this invention is to carry off noxious gases into the open air, and it is adapted to waterclosets, housemaids' sinks, lavatories, urinals, &c. The lids or covers to the waterclosets, sinks, or basins are so constructed that when they are shut down communication is opened to the flues, and offensive gases rising through the soil- or waste-pipes, or escaping from flaws in their joints, are carried to the outer air, instead of entering the room. The act of closing the closet-lid forces the air up the flue. The idea is excellent, and well carried out.

The apparatus is manufactured by E. Howard, 1 A, Upper Baker-street.

RUBBER-CUSHIONED AXLES FOR CARRIAGES.

MESSRS. WHITTINGHAM & WILKIN, 136, LONG-ACRE.

THIS invention consists in elastic rubber cushions imbedded in the nave of the wheel, and upon which rests the vehicle and its load. The principle of rubber bearings will be readily recognised, as the difference between cushioned and non-cushioned axles is obvious. The inner casing of the box resting upon elastic rubber prevents vibration, jolting, and pounding, and improves greatly the riding and wearing qualities of the carriage. Invalids, delicate persons, and those who are compelled to pass several hours daily in a carriage, will not fail to appreciate the advantages of this luxurious apparatus. It is only necessary to call attention to the invention to secure a trial of the apparatus.

PATENT BIER AND GRAVE BARRIER.

THIS is a clever invention by Mr. Stretton, of Worcester, providing a very convenient apparatus for removing coffins to the grave, and forming a barrier round the latter during the interment. The car attached is capable of being used as an ambulance waggon, a special frame for the accommodation of the sick being provided. It is more especially in regard to this secondary purpose of the invention we are interested, but there is an obvious advantage attending the use of the patent apparatus, as it obviates the necessity of touching a coffin after it has been once placed on the bier either at the bedside or at the door of the house where the death occurs.

CARE OF PAUPER LUNATICS IN ENGLAND AND WALES.

THE last Report of the Commissioners in Lunacy shows that on Jan. 1st last there were 62,107 recorded pauper lunatics in England and Wales, whereas at the beginning of 1859 they did not exceed 31,782. On this occasion, however, we do not propose to consider this remarkable increase of pauper lunacy, but only the evidence afforded by the report of the varying care of the lunatic paupers in different parts of England and Wales. Pauper lunatics for the purpose of this consideration may be divided into three classes—those in county or borough asylums, or in registered hospitals and licensed houses; those in workhouses; and those residing with relatives or others. It is well first to note that in the tables of the Report dealing with the distribution of these pauper lunatics in the various union-counties of England and Wales, the total number is given as 62,059, instead of 62,107, as in the other comparative tables. This difference of 48, however, is too small to disturb the value of the proportions we shall now proceed to discuss. Of these 62,059 pauper lunatics, 39,824, or 64·2 per cent., were, on Jan. 1st last, detained in various lunatic asylums or hospitals; 16,005, or 25·8 per cent., were retained in workhouses; and the remaining 6230, or 10·0 per cent., were residing with relatives or others, in receipt of out-door relief. If we compare these proportions with those that prevailed in 1859, the first year for which these figures are available, we find that the proportion of those residing with relatives and others has declined during the past twenty years from 18·2 per cent. to 10·0 per cent. on Jan. 1st last; the proportion in asylums, hospitals, and licensed houses, has increased in the twenty years from 56·7 to 64·2 per cent.; the proportion in workhouses has apparently remained almost stationary, as it was 25·1 per cent. in 1859, and 25·8 per cent. at the beginning of this year. These proportions, however, do not adequately represent the increased care of the pauper insane since 1859. In 1870 the Act for the provision of metropolitan asylums for the care and treatment of imbeciles, idiots, and persons of unsound mind, chargeable to the metropolitan unions and parishes, came into operation; and on January 1st last the three asylums at Leavesden, Caterham, and Darenth contained 4308 inmates, of which 1993 were at Leavesden, 1977 at Caterham, and 330 at Darenth. These institutions are, in accordance with the Act under which they exist, classed as workhouses in the Lunacy Commissioners' Report. The inmates are, indeed, not certified lunatics, but are included in the total of persons recorded as of unsound mind, and, in considering the subject of the care of the insane, should be dealt with as in asylums rather than as in workhouses. By transferring the 4308 inmates of these three metropolitan asylums for imbeciles from the workhouse to the asylum class, the proportion of pauper lunatics detained under treatment in asylums is raised to 71·2 per cent., against 36·7 per cent. in 1859, while the proportion in workhouses becomes 18·8 per cent. instead of 25·1 in 1859. This increase in the proportion of pauper lunatics under asylum treatment from 56·7 to 71·2 per cent. in twenty years represents a very marked improvement in the care of the insane poor. If, however, there has been to any extent in recent years

an increasing tendency to return as insane old men and women suffering from little more than senile dementia, the figures quoted above still under-estimate the recently improved care of the insane poor in England and Wales. Judged by this standard, the insane poor of London are better cared for in London than in any other part of the country. After transferring the 4308 inmates of the metropolitan asylum institutions at Leavesden, Caterham, and Darenth, from the workhouse to the asylum class, it appears that no less than 92·7 per cent. of the metropolitan insane were under asylum treatment, only 4·3 per cent. were retained in workhouses, and only 3·0 per cent. lived with relatives and others. In England and Wales, exclusive of the metropolis, the proportions in these three classes formed a striking contrast to the metropolitan proportions: 65·5 per cent. were in asylums, 22·6 per cent. were in workhouses, and 11·9 per cent. were residing with relatives. In the several union counties of England the smallest proportions of pauper lunatics under asylum treatment at the beginning of this year were 55·1 per cent. in Gloucester, 57·7 in Nottingham, 59·4 in Somerset, 60·5 in Wiltshire, and 60·6 in Lancashire; the largest proportions were 73·7 per cent. in Hertford, 75·2 in Cornwall, 78·9 in Buckingham, and 82·1 in Huntingdon. The proportion retained in workhouses ranged from 11·4 and 11·1 per cent. in Buckingham and Monmouth, to 26·9 and 36·7 per cent. in Stafford and Lancaster. Lancashire, which shows the largest proportion of pauper lunatics retained in workhouses, has the smallest proportion residing with relatives and others, which does not exceed 2·7 per cent.; this is slightly lower than the proportion in the metropolis, 3·0 per cent. In Wiltshire 20·4 per cent. of the pauper lunatics are residing with relatives and others, and no less than 22·0 per cent. both in Gloucester and Hereford. These wide variations in the proportional care and treatment of the pauper insane abundantly prove that other considerations than the best interests of the insane govern their treatment in the several counties. In conclusion, we may note that in Wales only 54·7 per cent. of the insane paupers are in asylums, 14·1 per cent. in workhouses, and that no less than 31·1 per cent. are under the dangerously slight control implied by their being classed as "residing with relatives and others." It is impossible to doubt the desirability for more uniformity in the care and treatment of the insane in different parts of England and Wales, as well as in due certification of all persons returned as insane by the various authorities who are responsible for their protection and support.

HEALTH OF LARGE ENGLISH TOWNS.

FORTY-SECOND WEEK OF 1879.

THE low temperature of last week caused a general increase of mortality, which was higher than in any week since the middle of May last. In twenty of the largest English towns, containing nearly a third of the entire population of England and Wales, 5367 births and 2963 deaths were registered in the week ending last Saturday. The births exceeded by 185, while the deaths were so many as 407 below, the average weekly numbers during 1878. The deaths, however, showed an increase of 192 upon those returned in the previous week, and were equal to an annual rate of 20·9 per 1000, against 19·9 and 19·6 in the two preceding weeks. During the past three weeks of the current quarter the death-rate in the twenty towns has averaged 20·1 per 1000, against 20·9 in the corresponding periods of 1877 and 1878. The lowest death-rates in the several towns last week were 12·4 in Brighton, 12·7 in Portsmouth, 13·9 in Wolverhampton, 16·2 in Bristol, and 17·0 in Newcastle-upon-Tyne. The rates ranged upwards in the other towns to 22·1 in Manchester and Bradford, 22·5 in Sheffield, 22·6 in Salford, 23·2 in Hull, 25·7 in Norwich, and 25·8 in Liverpool. The high death-rates in the last-mentioned towns were not, except in Liverpool, to any considerable extent due to excessive zymotic fatality. The deaths referred to the seven principal zymotic diseases in the twenty towns further declined to 468 last week, from 537, 490, and 474 in the three preceding weeks; 161 resulted from scarlet fever, 125 from diarrhœa, 65 from measles, and 52 from whooping-cough. The annual death-rate from these seven diseases averaged 3·3 per 1000 in the twenty towns, and ranged from 0·9 and 1·0 in Oldham and Brighton, to 5·3 both in Liverpool and Sheffield. The fatal cases of scarlet fever in the twenty towns, which had steadily increased from 94 to 151 in the five previous weeks, further rose to 161 last week; this disease showed the largest proportional fatality in Newcastle-upon-Tyne, Liverpool, and Leicester. The deaths from measles were numerous in Leeds and Liverpool. Diphtheria caused two deaths in Plymouth, in Birmingham, and in Liverpool. Diarrhœa fatality showed a further general decline, but exceeded the average number in the corresponding week of recent years. The deaths referred to fever were 42, of which 26 occurred in London, and but 16 in the nineteen provincial towns. A fatal case of small-pox was registered in London, but not one in any of the nineteen other towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had steadily declined in the seven preceding weeks from 111 to 42, were 46 on Saturday last; the number of new cases of small-pox admitted to these hospitals, which had been but 4 and 5 in the two previous weeks, rose to 18 last week, and exceeded the number of admissions in any week since the end of August. Small-pox caused 14 more deaths in Dublin, showing a marked increase upon recent weekly numbers.

Correspondence.

"Audi alteram partem."

PLEURAL AND DIAPHRAGMATIC TENSION.

To the Editor of THE LANCET.

SIR,—In your last issue Dr. Neale, after quoting Mr. Le Gros Clark's conclusions as to the cause of the arched tension of the diaphragm, remarks, that "the above offers a very imperfect explanation of the normal condition of the lungs and diaphragm, inasmuch as no allusion is made to the mechanical action of the . . . . pleuræ. The lungs cannot collapse . . . . just on the principle that a piece of wet leather, pressed tightly on a heavy weight, can raise the latter . . . ." In his very apt illustration, however, Dr. Neale does not seem to recognise atmospheric pressure, but rather a powerful attraction between the leather and the weight; for in commenting on Mr. H. St. C. Carruthers' case of congenital deficiency of the diaphragm he says, "The chest cavity was filled by a mass of intestines, stated to be the cause of the collapsed condition of the lungs; whereas, in fact, the collapse of the lungs was the cause of the position of the intestines." I incline to consider the collapse of the lungs as merely a condition, and the true cause of the position of the intestines to be the atmospheric pressure applied through the medium of the abdominal walls.

The discussion of problems connected with the mechanism of respiration is often characterised by vagueness of thought and expression, as instanced by the fallacy, many years ago exposed by Dr. Gairdner, but still too commonly accepted as an explanation of pulmonary emphysema, that an air-vesicle can be distended by uniformly applied external pressure. Another example occurs to me, found in one of our text-books, where the emphysema of the cellular tissue of the neck and neighbourhood, rarely met with in whooping-cough, is attributed to rupture of air-vesicles. This, if it should somehow happen, might occasion pneumothorax (absent from both the cases I have observed), but not the condition in question, to account for which we must suppose the rupture to be non-pulmonary and extra-thoracic, probably tracheal or laryngeal.

Mr. Le Gros Clark's statement of his conclusions, as given by Dr. Neale, is not even above criticism; at least, I think he himself could not defend the expressions I have placed in italics in the following quotations:—(*b*) "That the lungs retain their supplemental air by virtue of this tense condition of the diaphragm, *the elasticity of the former being resisted by the tension of the latter.*" The only resistance to the elasticity of the lungs is the atmospheric pressure, the diaphragm restricts itself to preserving a fair field with no favour. Again, he remarks, "Thus there exists a constant antagonism between the atmospheric pressure on the interior of the lungs and their elastic and contractile properties, tending to the expulsion of the air they contain, and *this*

expulsive power is limited by the resisting tension of the diaphragm." The expulsive power of a pair of lungs is a definite quantity, and to speak of it as limited by the resisting tension of the diaphragm, or even to speak of a resisting tension at all, is surely inadmissible.

I am, Sir, yours truly,

WM. MCLAURIN, M.B., C.M. (Glasgow.)

Islington, Oct. 19th, 1879.

THE WAR AT THE CAPE.

To the Editor of THE LANCET.

SIR,—It is a matter of some comment that the Commissariat Department, which gained for itself a somewhat unenviable notoriety during the Crimean campaign, and owing to the administration of which we have on more than one occasion had bad accounts since the commencement of the Zulu war, should be the only one to have honours and rewards heaped upon it. The senior officer has been promoted, and raised to the honourable distinction of a Knight Commander of the Bath. The other equally important departments of the army have as yet had no distinction at all. This has naturally caused a great deal of dissatisfaction. It is felt that the officers of the Army Medical Department, who have so ably attended to the care of the sick and wounded, the "Army Pay Department," which has had the spending and accounting for the large sums voted by Parliament for the payment of the troops and the expenses of the war, and the "Ordnance Store Department," which first equipped and started the force from England complete with all the necessary *matériel* to take the field, and has so efficiently kept up the supplies of ammunition, &c., since the commencement of hostilities, have equal claims with the Commissariat. Reports have on more than one occasion been made of soldiers being on "half rations," but nothing has ever been said that they were without medicines or surgical appliances, without money, or minus rifles, powder, and shot. If honours and rewards are given, by all means let them be distributed equally or not at all.

Sir Garnet Wolseley has, it is stated, drawn the attention of the authorities to the anomaly, and made suggestions for speedy amendment.

Your obedient servant,

SURGEON.

ARMY MEDICAL DEPARTMENT.

To the Editor of THE LANCET.

SIR,—At a time when discontent prevails in the Medical Department of the Army, and when it is difficult, if not impossible, to obtain candidates for it, is it not surprising that medical officers should apparently be forgotten when honours are being so freely lavished on those who have lately returned from Zululand? Surgeon-Major Reynolds was considered deser 'ng of the Victoria Cross for his conduct at Rorke's Drift, but nowhere have I seen that the Commander-in-Chief noticed his gallant services, and honoured him in the manner he did Major Chard at Portsmouth, although they arrived in the same vessel.

Again, Major Chard was honoured with a command to appear before Her Majesty at Balmoral; but no such honour for Dr. Reynolds. He has instead been ordered to report himself to the principal medical officer, Ireland, for duty there! Is it not very disheartening that such invidious distinctions should be made?

Yours truly,

Oct. 20th, 1879. DISJECTA MEMBRA.

YORKSHIRE ASSOCIATION OF HEALTH OFFICERS.

(From our own Correspondent.)

ON Thursday, the 16th inst., the fourth annual meeting of the Yorkshire Association of the Medical Officers of Health was held at Bradford, the president, S. W. North, Esq., of York, occupying the chair.

After examining the town sewage works in the morning, the efficiency of which seems to be undoubted, they visited the Fever Hospital, where they were entertained in a most hospitable manner by the House Committee. Among the recent improvements at this institution, a disinfecting stove, designed by Dr. Ransom, of Nottingham, excited special interest.

At 3 P.M. the general meeting was held, by permission of the Mayor (Mr. Augus Holden), in the Town Hall, at which about 300 gentlemen were present. The routine business having been transacted, Mr. Harris Butterfield, of Bradford, read a most interesting paper on "Infantile Diarrhœa." He considers the causes to be due mainly to high temperature, excremental pollution of atmosphere, construction of back-to-back dwellings, as also those built upon ashpit refuse which has been used to fill up old quarries, and improper feeding. The remedies, he thinks, are more easily recognised than applied—viz., improved dwellings with better ventilation, a more rapid and thorough removal of excreta, and a reform in the habits of the people as regards the general management of infants. A valuable communication was also made by Dr. Britton, of Halifax, on "A difficulty of Water-supply." His remarks were chiefly applicable to hilly neighbourhoods in rural districts. He gave the following example:—Water originally pure near the top of a hill is contaminated in its passage through a farmyard. It flows from thence over the land or in drains till it gets to a stone trough, forming the water-supply for block of cottages No. 1. The same thing is repeated lower down at block of cottages No. 2. As the law at present exists there seems to be no possibility of obtaining wholesome water for these blocks of cottages. The subject appears to be one of paramount importance, and we hope Dr. Britton's paper may be the means indirectly of providing a remedy for this pernicious state of things.

Bradford, Oct. 21, 1879.

PARIS.

(From our own Correspondent.)

SINCE the beginning of the present year the Morgue has been used for practical demonstrations in connexion with the chair of Legal Medicine. This teaching is almost unique, and attracts many foreign students. It would scarcely be possible to obtain elsewhere, in so short a time, a practical knowledge of the post-mortem appearances resulting from crime, but a month here would be almost sure to furnish the elements of a complete course of criminal necropsology. Besides the numerous bodies fished out of the Seine, subjects are brought hither by the police from all parts of Paris. Death by drowning, suicidal or criminal (for suicide is not a crime in France), are very frequent, but other causes are common enough. There is a fashion in these matters, as in everything else, and of late stunning and stabbing seem to have been in vogue. Self-destruction can be, and often is, surely and speedily effected by a jump from one of the towers of Notre-Dame, or from the top of the Arc-de-Triomphe, but a gentler method is often preferred. Statistics show that the scrapings of lucifer-matches are most frequently chosen for this purpose. Oxide of carbon, generated by means of charcoal, is also employed commonly enough, and the more so as it enjoys the reputation of lulling away the taker sweetly into eternity. But here, again, fashion has interfered, and a person with any sense of propriety is debarred from its use. Voluntary death by the inhalation of oxide of carbon is not considered at all *distingué*, and some unpleasantness might arise for the family when a means which is socially considered *un peu trop blanchisseuse* had been adopted by one of its members. The prefet of the Seine has now appointed a Commission to study the present organisation of the Morgue, and if projected arrangements are carried out, they will leave very little to desire. Amongst other novelties it is proposed to furnish a freezing apparatus, which will enable the bodies brought for identification to be kept for a considerable time.

Numerous changes have been made recently in the medical curriculum. Formerly the first of the five examinations for the doctorate could only be passed at the expiration of four years of medical study, and it then required about two years more to obtain the degree. Minor examinations, called *examens de fin d'année*, took place at the end of each of the first three years. These are now to be suppressed,

and the examinations for the *doctorat* distributed over the four years' curriculum. This will be a great reform, as the yearly examinations were often a mere farce. The examiners were loth to pluck candidates in subjects in which they would have to pass a much more stringent test later, and this indulgence, which put off the real ordeal until the end of the curriculum, encouraged many of the students to spend the first few years of their university life in idleness and dissipation. Another feature of the new programme is compulsory practical work which was formerly optional. The requirements in this respect have not yet been made known, but will probably range over the same subjects as in England.

M. Tillaux communicated to the Academy of Medicine a case where ablation of the uterus, or, as he calls it, "hysterectomy," was performed for fibroid tumour. This operation was officially condemned by the Academy, at the instance of Demarquay, in 1872; but, thanks to Duplay, Pean, and Tillaux, it has now obtained a footing in French surgery. In Tillaux's case it is interesting from the fact that menstruation took place three months after the operation, and has always occurred regularly since. It is probable that a small portion of the cervix, which was allowed to remain, may account for this peculiarity.

Teetotalers, non-smokers, and others who are anxious to distinguish themselves, will do well to communicate with the French Societies against the abuse of alcohol and tobacco. Numerous prizes and medals are offered for competition in 1880. The Société Française de Temperance has its official seat at 6, Rue de l'Université, and the Société contre l'abus du Tabac at 5, Rue St. Benoit. Information may be obtained on writing to the presidents.

Obituary.

ALFRED HENRY GARROD, M.A., F.R.S.

IT has rarely been our sad duty to chronicle the premature decease of so promising a representative of biological science as the subject of this notice. Professor Garrod, the eldest son of Dr. A. B. Garrod, F.R.S., of Harley-street, prepared for a scientific career by a complete course of medical studies, and the acquaintance which he thus acquired of the structure, functions, and diseases of the human body was of great advantage to him in his later researches in comparative anatomy and physiology. Seldom indeed has a career, cut short at the early age of thirty-three, been so brilliant as that of Professor Garrod. He entered the medical department of King's College in October, 1864, where he gained a Warneford Scholarship, and in successive years obtained the junior, second-year, and senior scholarships, besides many prizes in special subjects. He became a Licentiate of the Apothecaries' Company in 1868, and was appointed house-physician to King's College Hospital. He then determined to give up medicine for science, and proceeded to Cambridge, where in 1871 he took his B.A. degree, passing out first in the Natural Science Tripos of that year. Just previously he had been appointed Prosector to the Zoological Society, and in 1873 was elected a Fellow of St. John's College, his election being one of the first, if not actually the first, that was made from the Natural Science lists by that college. In 1874 he was appointed Professor of Comparative Anatomy at King's College in succession to Professor Rymer Jones, and this was followed in the next year by his being selected by the Council of the Royal Institution as Fullerian Professor to that body. In 1876 and 1877 he examined at Cambridge for the Natural Science Tripos, and became a Master of Arts and a Fellow of the Royal Society. In addition to the duties which his various appointments involved, Professor Garrod made many contributions to scientific literature. His earliest papers were physiological in their character, and his observations on the sphygmograph and on temperature are well-known to all students of physiology for the care and accuracy with which they were made. After his appointment to the Zoological Society his attention was mainly devoted to comparative anatomy, and his descriptions in the Proceedings of the Zoological Society of many of the higher vertebrata will perpetuate the memory of his name and good scientific work. By his personal friends, Professor Garrod will also be remembered for his indomitable energy, capacity for work, and singular originality of thought. The last characteristic is well shown in one of his most elaborate papers—viz., that on the "Classification of Birds," in which the suggestion of a new basis of classification is well worked out. He was also a frequent contributor to the biological section of *Nature*. He delivered the Introductory Lecture last year to the students of King's College, choosing for his subject the importance of a scientific training to the medical student, and this was practically his last official work. He was even then suffering from the early symptoms of laryngeal phthisis, and, after a lingering illness, died on the 17th inst.

MR. CROSBY LEONARD, F.R.C.S. Edin., M.R.C.S.

THE death of Mr. Crosby Leonard at the early age of fifty-one has occasioned a wide-spread feeling of grief in Bristol, notwithstanding that for some time Mr. Leonard had been incapacitated for practice by a form of paralysis, dating, we believe, from some injury to his neck, received a few years ago. He died somewhat suddenly on Oct. 13th. Mr. Leonard was born in Bristol in 1828. He studied at the Bristol Medical School and the Infirmary. After obtaining his qualification he spent some time in London and Paris. In 1854 he was appointed Lecturer on Anatomy in the Bristol Medical School, and held the post till 1864. He was then appointed to the Chair of Surgery, which he held till 1871. He was surgeon to the Infirmary from 1860 to 1878, and on his resignation was appointed consulting surgeon. He held the post of surgeon to the Bridewell for many years, and received a retiring pension from the magistrates. He was surgeon to the Rifles from the time of the formation of the corps. He had a large family practice, and did besides a considerable amount of work as a consulting surgeon. He had a high professional reputation, especially as a surgeon, and, as a man, was a universal favourite. In fact, he was one of those few men against whom no one had a bad word to say, and whom everybody was glad to see. Associated with a handsome person and an equable and shrewd mind, he had most genial manners and unfailing good nature. It may well be that a man so gifted, and filling such important offices, will be greatly missed.

ARTHUR LEARED, M.D.

ARTHUR LEARED was a native of Wexford, and received his education at Trinity College, Dublin, where he graduated both in arts and medicine. He first practised in the county of Wexford, but soon moved to London; during the Crimea he acted as physician at the British Civil Hospital at Smyrna. The war over, he returned home and again settled in practice in London as a physician, and continued in active work until this autumn. He was connected with several hospitals and dispensaries, and latterly was physician to the Great Northern Hospital, and to St. Mark's Hospital for Fistula. He was the author of several papers, medical, chemical, and physiological, but is chiefly known for his writings on digestion and dyspepsia. He is spoken of by those who knew him best as an excellent physician, exceedingly careful, and sparing no pains to arrive at a complete diagnosis, and successful treatment. Outside his profession he was widely known; he had a large circle of literary, scientific, and artistic friends, who appreciated his wide knowledge of many subjects, and were often surprised at the curious information he had gathered on matters heeded only by few. Very fond of travel, he had thrice visited Iceland, and became so proficient in the language that he published a book in the vernacular on the "Fatal Cystic Disease of Iceland." His works on Morocco and the Moors are well known, and attest his intimacy with that little visited country. For some years he had suffered severely from gout, and more recently the evidence of chronic contracted kidney was well marked. Wearied with work, he took a trip this summer to Tangier. He was feeling unwell when he left, and during a short stay at Lisbon become much worse, and on his arrival in London was very prostrate, his illness proving to be typhoid fever. For a time his symptoms improved, but he suffered from a relapse, again mended and again relapsed, and died on October 16th, at the age of fifty-six.

INSPECTOR-GENERAL W. T. DOMVILLE, M.D., C.B.,

HON. SURGEON TO THE QUEEN.

DR. DOMVILLE entered the navy as assistant surgeon 3rd of May, 1842, and became surgeon 7th February, 1852. He was raised to the rank of Deputy Inspector-General 24th June, 1866, and to that of Inspector-General 18th February, 1875.

The deceased gentleman served as assistant-surgeon in Plymouth Hospital, in the *Eurydice* on the West Indian Station, in the *Barratto Junior* convict ship, the *Excellent* gunnery ship at Portsmouth, and Greenwich Hospital. As surgeon he served in the *Resolute* Arctic Expedition, in the Woolwich Infirmary, and in the *Agamemnon* in the Mediterranean. As staff-surgeon he served in the *Indus* flag ship in North America, in Bermuda Hospital, and in the *Fisgard* at Woolwich. As a deputy inspector-general he served in Malta and Plymouth Hospitals, and as an inspector-general in charge of Haslar Hospital. Towards the end of September last he was seized with a feverish cold; afterwards his temperature became high, and the characteristic eruption of enteric fever appeared. He seemed to progress favourably for some days, when he was attacked with phlebitis, followed by rigors. His symptoms gradually assumed an alarming character, and he became unconscious and peacefully passed away on 21st October, at 6.20 P.M., deeply regretted by a large circle of personal friends, the service of which he was a distinguished member, and the profession to which he belonged.

Medical News.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Oct. 16th:—

Hatton, George Stokes, Newent, Gloucestershire.
Payne, John Woolland, Finsbury-square.

The following gentlemen on the same day passed the Primary Professional Examination:—

Alfred Osborne Knight, Middlesex Hospital; John Best Trapp, Sidney Offord Stuart, and Timothy A. J. Shepherd, Guy's Hospital; Wm. Weston Pitman and Harold A. Bains, Charing-cross Hospital; Geo. Henry Knight, University College; Charles Harrison, St. Bartholomew's Hospital.

The successful candidates at the competitive examination for the Society's prizes in Materia Medica and Pharmaceutical Chemistry, held in August last, were—

1st.—Clarance William Haig Brown (St. Thomas's Hospital); the Gold Medal.
2nd.—John William Ellis (Liverpool School of Medicine); the Silver Medal and Books.

QUEEN'S UNIVERSITY IN IRELAND.—The following degrees were conferred on the 15th inst.:—

DOCTOR IN MEDICINE.—First Honour Class: James Barron, W. E. Ashley Cummins, Sinclair White. Second Honour Class: J. W. Macnamara, Robt. Mowbray. Upper Pass Division: John Acheson, Thos. M. Corker, G. H. D. Gimlette, Myles O'Reilly, Taylor Reynolds, John Smyth, Samuel A. Strahan, T. Kennedy Wheeler. Lower Pass Division: Henry K. Allport, Myles H. Atkinson, William Atkinson, Augustus H. Bampton, J. W. Beatty, William Jas. Cowden, Joseph Crowley, Samuel Dickey, Thomas Dorman, John E. Dowling, John Eadie, Alexander C. Fraser, James Geraghty, Hugh Greany, Edward Hanly, Patrick C. Hickey, Jas. Frank Holland, John Hosford, John E. Lane, Saml. G. Levis, Henry M'Cormick, John M'Cormick, Thos. P. Madden, Charles Magill, Samuel M. Malcomson, John Martin, Andrew S. Mitchell, Chas. A. P. Mitchell, Robert Mitchell, George R. O'Donovan, Thomas O'Kelly, Alexander Sharpe, Jacob Thomas Shipsey, John Simpson, William Smyth, Alex. C. Suffern, Horace R. Townsend, John Vint, John Watson, David L. Williams, James Wilson, William Mussen Young.

MASTER IN SURGERY.—John Acheson, Henry K. Allport, Augustus H. Bampton, James Barron, William Henry Bracken, Thomas M. Corker, Joseph Crowley, W. E. Ashley Cummins, Samuel Dickey, Thomas Dorman, John E. Dowling, A. Osmonde Geoghegan, G. H. Desmonde Gimlette, Hugh Greany, Edward Hanly, Gilbert Kirker, John M'Kinlay, Thomas P. Madden, Charles Magill, Samuel M. Malcomson, Charles Mitchell, Robert Mitchell, Robert Mowbray, Thomas M. O'Brien, T. Taylor Reynolds, Alexander Sharpe, Jacob Thomas Shipsey, John Smyth, Samuel A. Strahan, Alex. C. Suffern, Horace R. Townsend, John F. Tuohy, Sinclair White, David L. Williams.

COLLEGE OF PHYSICIANS IN IRELAND.—At the annual meeting of the College, held on St. Luke's Day, the 18th inst., the following office-bearers were elected for the ensuing year:—President: Henry Head. Vice-President: Fleetwood Churchill. Censors: Hawtrey Benson, Fleetwood Churchill, Walter G. Smith, Stephen M. McSwiney. Examiners in Midwifery: Edward B. Sinclair, Arthur V. Macan. Additional Examiners: George F. Duffey, Arthur V. Macan, J. W. Moore, Walter G. Smith, John M. Purser. Professor of Medical Jurisprudence: Robert Travers.

At the same meeting the following candidates were admitted to the Fellowship of the College:—

Reuben Harvey, J. Rutherford Kirkpatrick, Francis Quinlan.

DR. ALFRED J. G. WATERS has been re-elected Mayor of Okehampton for the ensuing year.

PROFESSOR CHARLES KELLY will deliver a lecture introductory to his course on Hygiene, at King's College, on Friday next.

THE Newtown and Llanidloes Guardians have increased the salary of Mr. Charles E. Monro, Medical Officer of the Llanllwchaiarn District, from £40 to £50 per annum.

THE Brighton Guardians have increased (and the Local Government Board have sanctioned the increase in) the salary of Mr. David Richards, medical officer to the workhouse and infirmary, from £240 to £280 per annum.

THE rise in the death-rate of London from 17·2, 19·0, and 19·7 per 1000 in the three previous weeks to 21·6 in the week ending last Saturday is to be attributed principally to the large increase in the mortality from diseases of the respiratory organs. The deaths from these affections, which had been stated as 201 and 190 in number in the two preceding records, were given in the last return as 318. Of the whole 1499 deaths last week, 31 were due to measles, 73 to scarlet fever, 14 to diphtheria, and 27 to whooping-cough.

VACCINATION GRANTS.—Dr. Williams, Mold, North Wales; Dr. John Shives, of Liversedge, Yorks; and Mr. Julian Willis, of the New Winchester and Andover Unions, have received Government grants for efficient vaccination.

THE GENERAL COUNCIL.—Dr. Andrew Wood has been re-elected representative of the Royal College of Surgeons of Edinburgh; and Dr. Aquilla Smith has been re-elected representative of the College of Physicians in Ireland.

UNIVERSITY OF ABERDEEN.—The following examiners have been appointed—namely, Dr. Robert W. Reid, in anatomy; Dr. Robert Smith, in chemistry and physiology; Mr. T. Jeffrey Parker, B.Sc. Lond., in botany and zoology; Dr. T. J. Maclagan, in the practice of medicine and pathology; Dr. David Greig, in surgery and materia medica; and Dr. Clement Godson in midwifery and medical jurisprudence.

QUEEN'S UNIVERSITY IN IRELAND.—Last week honorary degrees were conferred by this University upon the following members of the profession—viz., Dr. Wilbraham Falconer, of Bath, and Dr. Denis Charles O'Connor, of Cork, the degree of doctor in medicine; and to Mr. William MacCormac, of London, the degree of master in surgery. The latter gentleman is a distinguished graduate, both in medicine and arts of the University.

HOWARD MEDAL.—The following is the title of the Essay to which the medal will be awarded by the Statistical Society in November, 1880:—"The Oriental Plague in its Social, Economical, Political, and International Relations; special reference being made to the labours of Howard on the subject." Essays must be sent in on or before 30th June, 1880. The Council have decided to grant the sum of £20 to the writer who may gain the "Howard Medal" in November, 1880.

BEQUESTS TO MEDICAL CHARITIES, ETC.—The Edinburgh Royal Infirmary received £9300 in donations and legacies during the financial year just passed. The Halifax Infirmary has received £250 under the will of Mr. John Waterhouse, of Wellhead. The Queen's Hospital, Birmingham, has become entitled to £100 under the will of Mr. H. Symonds and £100 under that of Mr. J. R. Mott. The Birmingham and Midland Hospital for Women has received £100 under the will of Miss Georgiana Greaves. Mr. Samuel Norris, of Beacon Downes, bequeathed £100 each to the Devon and Exeter Hospital and the Exeter Dispensary. Mrs. Sparke has given £100 to the Ely Dispensary in memory of her late husband, Canon E. B. Sparke. Mrs. Bingley, of Scarborough, has bequeathed £100 to the dispensary of that town.

SURGEON-MAJOR REYNOLDS, V.C.—This gentleman, who arrived in Ireland last Monday, will be entertained by the president and council of the Royal College of Surgeons on the 1st proximo. He will also be a guest of the Board of Trinity College, on the occasion of the winter commencements, when the degree of LL.D. *honoris causâ* will be conferred on him by the University of Dublin; and, at the same time, the students of the medical school of the university will present Surgeon-Major Reynolds with a handsome revolver.

ADELAIDE HOSPITAL, DUBLIN.—His Grace the Duke of Abercorn formally opened the newly-erected "Madeline Wing" of the Adelaide Hospital last week before a large and influential assemblage. This addition to the institution has been erected in memory of a young lady by her relatives, and is intended for additional surgical wards. The walls are composed of parian cement, and the floors are constructed of teak; every appliance that sanitary science could suggest being adopted to make the addition in every way efficient.

SCHOLARSHIPS.—At King's College G. G. Hodgson and C. P. Childe have obtained the Warneford Scholarships of £25 per annum each, tenable for three years, and T. S. Short that of £25, tenable for two years; J. A. West has obtained the first Warneford Prize, value £25, and S. E. Craddock, the second, value £15; J. W. Kealy has obtained the first Leathes prize, and P. H. Emerson the second; and the Science Exhibition, given by the Clothworkers' Company, of £50 per annum, tenable for two years, has been awarded between R. H. Botham of the Medical Department, and G. M. Taylor of the Applied Sciences Department.—At the Charing-cross Hospital Medical School, C. W. Biden has obtained the Entrance Scholarship of £30, and H. Colman that of £20.—At University College the Andrews Entrance Prizes (£20 each) have been gained by H. R. Williams (English and other languages), A. Berry and J. G. Pease (Science); the Medical Entrance Exhibitions, tenable for two years, have been gained by S. C. Jones (£30), E. W. Emtage (£20), and C. Pereira (£10).

Medical Appointments.

AFFLECK, J. O., M.D., F.R.C.S.Ed., has been appointed Lecturer on the Practice of Physic at the School of Medicine, Edinburgh.

BARR, T., M.D., F.F.P.S.G., has been appointed Lecturer on Aural Surgery at Anderson's College, Glasgow.

BLAXLAND, Mr. H., has been appointed Assistant Medical Officer to the Hospital for Insane, Gladesville, New South Wales, vice Erith, resigned.

BUIST, J. B., M.D., M.R.C.P.Ed., has been appointed Lecturer on Pathology at the School of Medicine, Edinburgh.

CALDER, Mr. M., has been appointed a Resident Surgical Assistant to the Royal Infirmary, Glasgow.

COOK, Mr. A. H., has been appointed Medical Tutor to the Sheffield School of Medicine, vice Branfoot, resigned.

CULHANE, F. W. S., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer and Public Vaccinator for the Priors-Marston District of the Southam Union, Warwickshire, vice Elkington, resigned.

DICK, W., M.B., L.R.C.S.Ed., has been appointed a Resident Medical Assistant to the Royal Infirmary, Glasgow.

FURNESS, J., L.F.P.S.G., has been appointed Certifying Factory Surgeon for the District of Hesket-Newmarket, vice Brown, deceased.

GREEN, W. E., M.R.C.S.E., L.S.A.L., has been appointed a Medical Officer to the Isle of Wight Railway, vice Maund, deceased.

HARKNESS, T., M.B., C.M., has been appointed a Resident Surgical Assistant to the Royal Infirmary, Glasgow.

HOWLETT, E. H., M.R.C.S., L.R.C.P. (late Surgical Registrar, King's College Hospital), has been appointed Assistant Demonstrator of Anatomy at the London Hospital Medical College.

HYRONS, Mr. E. A., has been appointed a Resident Medical Assistant to the Royal Infirmary, Glasgow.

IMLACH, F. B., F.R.C.S.Ed., has been appointed President of the Royal College of Surgeons, Edinburgh, for the ensuing year.

JACKSON, Mr. W., has been appointed a Resident Surgical Assistant to the Royal Infirmary, Glasgow.

JONES, Mr. J. H., has been appointed a Resident Medical Assistant to the Royal Infirmary, Glasgow.

KELLETT, R. G., L.K.Q.C.P.I., L.R.C.S.I., has been appointed Medical Officer for the No. 2 Division, No. 1 District, of the Halstead Union, Essex, vice Borham, resigned.

KEOGH, Dr. A., has been appointed a Resident Clinical Assistant to the Hospital for Consumption and Diseases of the Chest, Brompton, vice Wall, resigned.

KERIGAN, L., L.R.C.S.I., L.A.H.D., has been appointed Medical Officer, Public Vaccinator, &c., for the Castletown-Geoghegan Dispensary District of the Mullingar Union, co. Westmeath, at £120 per annum and fees, and £15 per annum as Medical Officer of Health, vice Strahan, appointed to the No. 2 North Dublin Dispensary District of the North Dublin Union.

KRAUSS, Dr. A. (of Nüremberg), has been appointed Resident Medical Officer to the German Hospital, Dalston, vice Dr. Max Altdorfer, resigned

MACKAY, Mr. H., has been appointed a Resident Surgical Assistant to the Royal Infirmary, Glasgow.

MACKESY, G. I., M.B., L.R.C.S.I., has been appointed Medical Officer to Bishop Foy's School, Waterford, vice Elliott, deceased.

MCLACHLAN, R., M.B., C.M., has been appointed a Resident Surgical Assistant to the Royal Infirmary, Glasgow.

MCWATT, J., M.B., C.M., has been appointed a Resident Medical Assistant to the Royal Infirmary, Glasgow.

MAPOTHER, E. D., M.D., F.R.C.S.I., has been appointed Consulting Surgeon to St. Joseph's Hospital for Children, Dublin.

PATTERSON, J., M.B., L.R.C.S.I., has been appointed Certifying Factory Surgeon for the District of Ramelton, co. Donegal.

POUNTNEY, W. E., M.B., C.M., has been reappointed a Medical Officer of Health for the Lytham Urban Sanitary District and the Preston Port Sanitary District, at £50 per annum, until September 29th.

SIMON, R. M., B.A., M.B., M.R.C.P., has been appointed Assistant-Physician to the General Hospital, Birmingham.

TAYLOR, R. S., M.B., M.R.C.S.E., L.S.A.L., has been appointed a Medical Officer to the Derby Provident Dispensary, vice Taylor, resigned.

THURSFIELD, W. N., M.D., M.R.C.S.E., San. Sci. Cert. Cantab., has been reappointed Medical Officer of Health for the Ludlow Urban Sanitary District, at £25 per annum.

THURSTON, G. J., L.R.C.P.Ed., M.R.C.S.E., L.S.A.L., has been appointed a Medical Officer to the Isle of Wight Railway, vice Maund, deceased.

URQUHART, A. R., M.D., has been appointed Physician-Superintendent to Murray's Royal Asylum, Perth, vice Lindsay, retired.

WEBSTER, T. J., M.R.C.S.E., L.S.A.L., has been appointed Chief Medical Officer to the Cyfarthfa Iron Works, Glamorganshire, vice Thomas, deceased.

WITHAM, Mr. A., has been appointed a Resident Medical Assistant to the Royal Infirmary, Glasgow.

BOOKS ETC. RECEIVED.

J. E. ADLARD, London.
Proceedings of the Medical Society of London. Vol. IV. 1877-79.

ASSELIN ET CIE., Paris.
Bulletins et Mémoires de la Société Médicale des Hôpitaux de Paris. Vol. XV. 1878.

CASSELL & CO., London.
The Life and Work of St. Paul. By F. W. Farrar. Vols. I. & II.

W. & R. CHAMBERS, London.
Analytical Chemistry. By W. Dittmar.

CHAPMAN & HALL, London.
Jack's Education, or how he learnt Farming. By Prof. H. Tanner.
Farming for Pleasure and Profit. Third Section: Tree Planting. By A. Roland.

J. & A. CHURCHILL, London.
On Cancer Life, its Causes, Progress, and Treatment. By R. Mitchell.
Outlines of Medical Treatment. By Dr. S. Fenwick.

HODDER & STOUGHTON, London.
Bible Hygiene, or Health Hints. By a Physician.

C. KEGAN PAUL & CO., London.
Mind in the Lower Animals. By Dr. W. L. Lindsay. Vols. I. & II.
The Abolition of Zymotic Diseases. By Sir T. Watson, M.D.

E. KEY, Madras.
A Second Special Report on Typhoid or Enteric Fever in Relation to British Troops in the Madras Command. By Surgeon-General C. A. Gordon.

LONGMANS, GREEN, & CO., London.
Clinical Lectures and Essays. By Sir James Paget.

MACLACHLAN & STEWART, Edinburgh.
The Principles and Practice of Veterinary Medicine. By William Williams.

MACMILLAN & CO., London.
A Treatise on Chemistry. By Profs. Roscoe and Schorlemmer.

THE NEW PLANT AND BULB COMPANY, Colchester.
On Lilies and their Culture. By Dr. Wallace.

THE NEW SYDENHAM SOCIETY, London.
A Handbook of Physical Diagnosis. By Dr. P. Guttmann.

THE SOCIETY FOR PROMOTING CHRISTIAN KNOWLEDGE, London.
The Habitation in Relation to Health. By Dr. F. S. B. F. De Chaumont.

Le Pansement Antiseptique exposé spécialement d'après la Méthode de Lister. By J. de Nussbaum. (Baillière et Fils, Paris.)—Real-Encyclopädie der Gesammten Heilkunde. By Dr. A. Eulenburg. (Urban & Schwarzenberg, Wien.)—The Illustrated Young People's Paper. Part IV. (Haughton & Co., London.)—Vierteljahresschrift für Dermatologie und Syphilis. Jahrg., 1879. (Wilhelm Braumüller, Wien.)—Atlas of Histology. By Dr. E. Klein & E. N. Smith. Part VIII. (Smith, Elder, & Co.)—The Contemporary Review; October. (Strahan & Co.)—House and Home; October.—The Magazine of Art; October. (Cassell & Co.)—Fraser's Magazine; October. (Longmans, Green, & Co.)—Good Words; October. The Sunday Magazine; October. (Isbister & Co.)—Sunday at Home; October. The Leisure Hour; October. The Boy's Own Paper; October. (The Religious Tract Society.)

Births, Marriages, and Deaths.

BIRTHS.

FRAZER.—On the 15th inst., at Yorevale, Bournemouth, the wife of William Frazer, M.D., of a daughter.

ILOTT.—On the 12th inst., at Bromley, Kent, the wife of Herbert James Ilott, M.D., of a son.

NICHOLSON.—On the 13th inst., at Camden-road, the wife of Emilius Rowley Nicholson, M.D., of a daughter.

RENTON.—On the 20th inst., at St. James's-terrace, Great Western-road, Glasgow, the wife of James Crawford Renton, M.B., of a son.

SIMPSON.—On the 19th inst., at Horton-crescent, Rugby, the wife of J. Herbert Simpson, M.D., of a daughter.

WHITE.—On the 10th inst., at Moat House, Kingston-on-Thames, the wife of George Farr White, F.R.C.S., of a son.

WILLIAMS.—On the 12th inst., at Wrexham, the wife of Joseph Llewelyn Williams, M.B., of a daughter.

WILLS.—On the 19th inst., at Merton-road, Bootle, the wife of Thomas Munns Wills, L.K.Q.C.P.I., of a son.

MARRIAGES.

GURDON—RANDALL.—On the 14th inst., at St. Marylebone Church, by the Rev. C. J. Goody, M.A., assisted by the Rev. A. J. Buss, Edwin J. Gurdon, M.R.C.S.E., L.R.C.P.Ed., of Hopton, Thetford, Norfolk, to Ellen Anne, second surviving daughter of John Randall, M.D., of 35, Nottingham-place, London.

HOLDEN—WARE.—On August 28th, at Melbourne, Australia, Lonsdale A. Holden, M.R.C.S., to E. Ursula, daughter of the late J. M. Ware, Esq., of London.

DEATHS.

ARMISTEAD.—On the 18th inst., at Cambridge, of diabetes, Emily Agnes, the beloved wife of William Armistead, M.D., in her 32nd year. Friends will please accept this intimation.

ARNOTT.—On the 16th inst., at Kirkconnell Hall, Ecclefechan, F. S. Arnott, M.D., C.B., Honorary Surgeon to the Queen, late Surgeon-General, Bombay Medical Establishment.

DOMVILLE.—On the 21st inst., at Haslar Hospital, William Thomas Domville, M.D., C.B., Inspector-General of Hospitals and Fleets, and Honorary Surgeon to the Queen.

DUNNAGE.—On the 15th inst., at Surbiton, Arthur Richard Dunnage, M.R.C.S.E., aged 31.

FITZGERALD.—On the 15th inst., at Twerton-on-Avon, Dudley Loftus FitzGerald, M.D., aged 30.

JOHNSTON.—On the 17th inst., at Highter, Virginia, co. Cavan, John Alexander Johnston, L.K.Q.C.P.I.

KAVANAGH.—On the 19th inst., at George-street, Limerick, Bernard Kavanagh, M.D., aged 56.

LEONARD.—On the 13th inst., at Clifton, Crosby Leonard, F.R.C.S.Ed., aged 51.

ROGERS.—On the 18th inst., at East Grinstead, John Henry Rogers, M.R.C.P.L., F.R.C.S.E.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

Notes, Short Comments, and Answers to Correspondents.

DRINKING FOUNTAINS AND CATTLE TROUGHS.

WE are very glad to support the appeal of Mr. Samuel Gurney, the Chairman and Treasurer of the Metropolitan Drinking Fountains and Cattle Trough Association, for the needful funds to enable this Association to extend its good work. Let those who know little of these things go some day to one of these troughs, say to that at the Victoria-street end of the Vauxhall-bridge-road, and count the number of thirsty mouths that are there refreshed, and watch the satisfaction afforded to the animals attached to dray, cab, or van; for owners have at last learnt to recognise this important fact, that a horse, and for that matter any quadruped used by man for draught, may, as a rule, be safely left to drink as much as he likes. We may be assured that he will not drink more than is good for him. Man is the only animal that is thus likely to commit himself, and so we again commend Mr. Gurney's Association to the charitable instincts of our well-to-do readers.

RENAL CALCULUS.

To the Editor of THE LANCET.

SIR,—On reading the very interesting clinical lecture by Mr. Pick on the above subject, I was much surprised to see the statement there put forth, that "more blood is driven to the internal organs when the surface of the body is warm, as during rest in bed"; but, as a matter of fact, physiologists teach just the opposite, as may be seen by reference to page 375 of Foster's Physiology, where the influence of external heat and cold on internal temperature is discussed; so it appears to me that the theory of the late Dr. Bence Jones as to the cessation of incressed hæmorrhage in cancer of the kidney during confinement to bed cannot be maintained. May I ask if it is generally recognised that such increased bleeding in malignant disease of the kidneys is a result of rest in bed?

Faithfully yours,

Oct. 20th, 1879. M.R.C.S.

COTTAGE HOSPITALS.

BOURTON-ON-THE-WATER, a village of 1109 inhabitants in Gloucestershire, has just been supplied with a new cottage hospital, in lieu of that which has existed for more than twenty years, and has proved a very great success. The new building has cost £1100, but £870 only have been collected. It was formally opened at the end of last month by Mr. R. R. Wingfield, High Sheriff of Gloucestershire.

Etiquette, R. R.—The best way for partners with such grateful windfalls is to divide them equally.

THE TREATMENT BY HOT-WATER INJECTIONS OF RETAINED PLACENTA AFTER MISCARRIAGE, ACCOMPANIED BY HÆMORRHAGE.

To the Editor of THE LANCET.

SIR,—The following case may be deemed worthy of insertion in your columns.

On October 7th I was sent for to A. B——, aged thirty-two, multipara, who I was informed was in her fourth month of pregnancy. On my arrival I found the patient suffering from severe colicky pains, which she told me had been present more or less for the week previous. I then made a vaginal examination, and shortly afterwards extracted a fœtus, much decomposed, of apparently about four months' development. Owing to the condition of the cord and the situation of the placenta, I could not extract the latter. Having ordered a mixture with full doses of liquor acetatis ammon., I then left the house. On visiting her next morning I found profuse hæmorrhage, no uterine pains, but could just ascertain the presence of the placenta at the os. I then tried by the sound to extract it, or at all events to assist its extrusion. I was again unsuccessful. I was summoned hastily at 5 A.M. on the 9th. I was told she was dying. The appearance she presented was startling: the face was sallow and pinched; tongue dry and brown; continued retching; pulse small, quick, and weak; no pain. On proceeding to again examine her, I found the bed filled with clots, and smelling most offensively from the discharges. I removed some large clots from the vagina, but could not extract the placenta. I now thought that there had been sufficient manual interference, and determined to try hot-water injections mixed with carbolic acid (1 to 80). I gave the first injection myself, to be sure of its being thoroughly done, and instructed the attendant to use it three times daily. The same evening I visited her, and found her improved. The next morning she expressed herself as feeling much better. I then found the placenta removed, absence of hæmorrhage and fetor, and the countenance more natural. Since then she has gone on improving under liberal diet and solution of perchloride of iron, and is now convalescent.

Remarks.—In miscarriage, as a rule, very little anxiety need be felt about the retention of the placenta, as it is almost always extruded after a longer or shorter period; but when symptoms of septicæmia as well as continued hæmorrhage are present, matters assume a grave aspect. In the foregoing case I am convinced the successful issue was due to the action of the acid as a septicide, and the emollient and soothing effect of the hot-water douche in reducing the vaginal tenderness and relaxing the uterine muscular tissue. The almost rapid improvement in the patient's condition seems to bear it out.

Your obedient servant,

H. J. FORSTER, L.R.C.S.I. & L.M.

Deeping St. James, Lincolnshire, Oct. 20th, 1879.

VACCINATION BY HYPODERMIC SYRINGE.

An English Surgeon wishes to know if vaccination has ever been performed by hypodermic injection, and whether such a method would be superior to the ordinary ones.

Mr. B. J. Tuck.—We shall be pleased to look at the paper.

DISINFECTANTS.

To the Editor of THE LANCET.

SIR,—From your epitome (in last week's number) of the "experiments on disinfectants" made by Surgeon-Major J. Lane Notter, it would appear that chloride of lime proves to be a more powerful antiseptic than carbolic acid. Such a result is so contrary to that obtained by the late Dr. Crace Calvert, whose report (enclosed) we have lately tested and verified, that we are disposed to think there is *need* of further inquiry before a proper decision on the relative antiseptic merits of carbolic acid and chloride of lime can be given. Below we hand you copies of results obtained by,

Yours truly,

Manchester, Oct. 15th, 1879. F. C. CALVERT & Co.

Flour paste (1 oz. of flour to 1 oz. of water)	Offensive in seven days.
Similar paste, with 25 grains of chloride of lime added	Offensive in nine days. Mildew growth *more* rapid than in simple flour paste.
Similar paste, with 25 grains of carbolic acid, *15* per cent. of powder added (i. e., 3·75 grains of genuine carbolic acid)	Still perfectly sweet and unaltered, though mixed seventeen days since.

E. J. S. K.—The question is rather vague. One advantage would be that the ammonia would tend to counteract the depressing effect of the salicylic acid; but this remedy is chiefly applicable to febrile rheumatism.

ANTIQUARIAN RESEARCHES NEAR FERMANAGH.

AT Killenagh there were discovered recently two cinerary urns, containing burnt bones, and a silver coin with characters almost undecipherable. The practice of burning the dead is said to be unknown in the history of the early Irish—a fact which shows the remote period at which these urns were entombed.

A.—The employers are not liable, nor is A., but the men who send for B.

OBSCURE CASE OF POISONING.

To the Editor of THE LANCET.

SIR,—I should be very glad to hear, through the columns of THE LANCET, if any of my professional brethren have met with a case similar to the following.

Nine ladies and gentlemen, the residents and visitors at a country house, all previously in good health, were seized after dinner with most severe pain in the loins and over the region of the bladder, accompanied by frequent and most painful micturition. The symptoms lasted several hours, and then passed off. All were affected in some degree, but some much more severely than others. Only one patient vomited, and left the table immediately after soup, and there was in neither case any intestinal disturbance nor any pyrexia, but the pain in the bladder was intense. There was nothing unusual in the appearance of the urine. It is quite clear they must all have taken something to cause these symptoms. There is no suspicion of any medicinal substance, such as cantharides, having been mixed with the food to account for them. Can anything else have produced them? Everyone partook of five o'clock tea; some had two cups, and those were the most severe cases. The dinner at 7.30 consisted of soup, fish (whiting), veal-cutlets, joints, and sweets. The culinary arrangements have been inquired into, but nothing bearing upon the case elicited. Unfortunately, through the shortcomings of a servant, specimens of the urine and vomit were thrown away, or they might have assisted one.

Perhaps some brother professional may have met with a similar case. One is anxious to find out as much as possible to avoid recurrence. No servant in the house was affected in the least. I might add that the treatment adopted—namely, the application of hot fomentations, the administration of diuretics and opium—seemed of great service.

I am, Sir, your obedient servant,

October 19th, 1879. MEDICUS.

*** Green tea will every now and again produce the effect described. Possibly the tea was strong, and made from a special sample.—ED. L.

Y. L., M.R.C.S., L.M., L.S.A.—It is not indispensable; but nearly all the examining bodies now require such certificates as part of the curriculum.

Mr. R. H. Patterson.—We are not aware.

M. C. H.—Yes.

BICHLORIDE OF ETHIDENE AS AN ANÆSTHETIC.

To the Editor of THE LANCET.

SIR,—The interesting paper lately published by Dr. Jacob, on "Ether as an Anæsthetic," induces me to draw attention to some points of interest in connexion with bichloride of ethidene, which has lately been used for the purpose of producing anæsthesia. It has at present been so little tried that a long time must necessarily elapse before its relative value can be determined. I have administered this drug in half a dozen cases, and so far I have met with favourable results. Unconsciousness is produced, so far as my experience goes, with very little struggling, and four and three-quarter minutes was the longest time required. The pulse is slowed, but remains full, and I have not yet met with any symptom of cardiac failure. The breathing was quite quiet and uninterrupted, and there was an absence of all bronchial irritation and frothing at the mouth. Vomiting occurred once in the first five cases, and then was both slight and transient. The sixth case, so far as vomiting is concerned, was not, in my opinion, a fair test. The subject was a child, who had come from the country to have an ophthalmic operation performed, and there was an absence of those precautions which can only be ensured with in-patients of hospitals and in intelligent private patients. The popular notion seems to be that if a person has to submit to a surgical procedure severe enough to require anæsthesia, a good meal is necessary to carry him through it. A practical application of this notion is inconvenient. Vomiting did occur in this (my sixth) case, but not with severity. The largest quantity used was an ounce; this was given to a boy, eighteen years of age, who had an organic systolic murmur at the apex of the heart, and he was kept unconscious for thirty-five minutes. In all these cases the drug was administered on a piece of lint or a towel. It was obtained from C. A. F. Kalbaum, of Berlin, by Messrs. Burgoyne, Burbidges, and Co. It is a very expensive agent (I believe 32*s.* a pound), and should be kept in a capped bottle for the purpose of preventing evaporation.

Your obedient servant,

J. HENRY PALMER,
Resident Surgeon, Birmingham General
October, 1879. Dispensary.

Rev. M. Mould.—A full account of the symptoms of Rabies, comprised in a report by MM. Bouley and Proust, will be found in THE LANCET, vol. ii. 1878, p. 101.

F. E.—Grossmith, 175, Fleet-street.

THE HEALTH OF TOTTENHAM.

THE following report has been addressed to the Tottenham Local Board of Health by their medical officer of health:—

GENTLEMEN,—I submit to you to-night a report, and I am glad to say a favourable one, on the health of Tottenham during the last quarter, also an analysis of the births and deaths for the same period.

The total births amounted to 342, the number for the corresponding quarter of 1878 being 277. The total number of deaths from all causes amounted to 132, against 153 in the corresponding quarter of 1878. The number of deaths from the seven principal zymotic diseases was 25, against 42 in the same period of 1878. The annual death-rate per 1000 from all causes was 15·5, against 18 in the third quarter of last year. The annual death-rate per 1000 from zymotic disease was 2·9, against 4·9 in the corresponding quarter of last year. It is satisfactory to notice that of the 25 deaths from zymotic disease, only 9 took place in Tottenham: 2 from whooping-cough, and 7 from diarrhœa. We had no deaths from small-pox, measles, scarlet fever, diphtheria, or enteric fever. It is remarkable that Tottenham should have been so exempt from measles during the quarter, considering that the disease was extremely fatal both in east and north London, especially in Islington, where no less than 140 deaths from measles occurred in eleven weeks. The deaths from diarrhœa in Tottenham were less than half the number in the corresponding quarter of last year. This may be accounted for by the low temperature, especially in July, where the mean temperature was only 58·1°—viz., 3·5° below the average for the corresponding month for 100 years, and was lower than any July since 1860. In London so small a fatality of diarrhœa in July is without precedent during the last thirty years. Notwithstanding the unseasonable cold, the mortality from diseases of the respiratory organs and phthisis in Tottenham was only slightly in excess of the numbers for the same quarter of last year. This year the deaths from diseases of the respiratory organs amounted to 15, against 12 for the third quarter of 1878. The number of deaths referred to phthisis was 17 for the third quarter of this year, against 13 for the corresponding period of last year. During the months of July, August, and September, deaths from diseases of the lungs in London were in excess of the average, with the exception of the week ending September 6th, when these diseases corresponded to the corrected average.

Tottenham, Oct. 14th, 1879. W. TYNDALL WATSON, M.D.

"OUGHT MEDICAL MEN TO DISPENSE THEIR OWN PRESCRIPTIONS?"

THIS is a question which has been frequently discussed incidentally, but not in any very formal way. England is behind most other countries in separating the work of pharmacy from that of the practice of medicine; but it is not altogether or chiefly the fault of English medical men.

"SMOKING IN THE DARK."

To the Editor of THE LANCET.

SIR,—The paragraph in your issue of October 18th interested me much. As a constant smoker I may be able to throw a little light on the subject.

Given a smoking carriage in a train, six smokers, light out, and passing through a tunnel, I have noticed in my own case a tendency to smoke too hard; the same in fellow-passengers. Everyone, on again reaching daylight, had his pipe or cigar in full blast, and the frequent coughs showed that the majority were "over-smoking."

I knew a blind fiddler in 1857 who every Saturday went as musician to a cartfull of road-passengers into Norwich. He always thankfully received a cigar, and, though not over-drawing it, always kept it alight till finished. An uncle of the writer's, for years totally blind, formerly a very moderate smoker, now smokes still less, but never lets his cigarette out.

My own experience goes thus far, that darkness takes away half the pleasure.

Yours obediently,
Carlton Club, Pall-mall, Oct. 22nd, 1879. JOHN BATEMAN.

G. P.—Conine or conicine should not be used hypodermically without proper consideration. Some observations likely to be useful to our correspondent appeared a few months ago, from the pen of M. Tiryakian, in the *Annuaire de Thérapeutique*, and were noticed in THE LANCET of April 26th last.

H. G.—Half the fees.

Dr. Casarilla.—We shall be obliged.

UMBILICAL HERNIA.

To the Editor of THE LANCET.

SIR,—Mr. Sheaf writes to me that I have misquoted his case of Strangulated Umbilical Hernia in the allusion I made to it in last week's LANCET. I should have stated that the sac *was opened*, instead of the opposite.

I am, Sir, yours obediently,
HENRY A. LEDIARD, F.R.C.S.
Cleveland-street, W., Oct. 23rd, 1879.

THE LATE DR. JOHN G. FLEMING.

To the Editor of THE LANCET.

SIR,—In your obituary notice of the late Dr. John G. Fleming, of Glasgow, the nature of his illness was, as you observe, sceptically received by the profession—viz., typhoid fever in an octogenarian. The notes of this case would be most valuable, as they would help to settle the vexed question of the possibility of typhoid in advanced life.

Yours faithfully,
Derby, Oct. 21st, 1879. T. CARTER WIGG.

EGGS AS FOOD.

To the Editor of THE LANCET.

SIR,—Having read your remarks respecting the Leeds eggs case, I fear the report you have read has misled you. The question to be decided was not, Are eggs food? but Are eggs meat within the meaning of the Act under which the information was laid? The arguments on both sides were very exhaustive, and Mr. Bruce took time to consider his judgment. The remark of the learned gentleman on behalf of the prosecution—namely, if the stipendiary would only stretch his opinion to meet the case, that out of evil might come good—sounds very much like sensible logic; but the stipendiary declined to do so, saying, however much his own feelings were in favour of fining the defendants, he would decide the case according to law. A week after he decided eggs were not meat within the meaning of the Act.

I remember some years ago in the Court of Exchequer, before the late Lord Chief Baron Pollock, a cause being heard in which the question arose, Are eggs meat? And the learned Baron held thus: The egg having come from the hen, and not having passed through the process of incubation, could not be held to be meat, although it might constitute food in another form.

However much common sense, as you justly observe, points to these men being fined, it does seem preposterous to ask a magistrate to act in any way except the one laid down for his guidance by the Act of Parliament itself.

I trust you will, in justice to our learned stipendiary, find room in your columns for the insertion of this letter.

I am, Sir, yours obediently,

Leeds, Oct. 18th, 1879. C. DAVIS.

IT is requested that provincial papers sent for the information of the Editor may be marked so as to direct attention to the medical or sanitary matters it is desired to notice.

LETTERS not answered in the current week will be dealt with in the next issue of THE LANCET.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Goolden, London; Dr. Collins, London; Mr. Crowne, Tottenham; Mr. Fenton; Dr. Woodward, Worcester; Dr. Thomas, London; Dr. Hutchinson, Chipping Norton; Mr. Goodfellow, Hyde; Mr. Dickson, Worksop; Dr. Shives; Dr. Denton, Steeple Claydon; Mr. Palmer, Birmingham; Mr. Bond; Mr. Bloxland, Gladesville, N.S.W.; Mr. M'Laurin, Islington; Mr. Seabrook, Glendy, South Australia; Mr. Nathan, Leeds; Dr. Stewart, Edinburgh; Dr. W. H. Stone, London; Dr. Hewson, Stafford; Mr. Ellis, St. John's-wood; Mr. Atkins, Sutton; Mr. Gifford, Egham; Mr. Dane, Leeds; Mr. Walker, Huntley; Mr. Wingate, New York; Mr. Paramore, London; Mrs. Thom, Port Elizabeth; Dr. Macrae, London; Messrs. Newbery and Co., London; Mr. Barford, Wokingham; Mr. Cooke, Hornsey; Mr. Raye, London; Dr. Brakenridge, Edinburgh; Mr. Odell, Birmingham; Mr. Hogg, Bournemouth; Messrs. Kilner Brothers, London; Mr. Forster, Market Deeping; Mr. Monaghan, Accrington; Dr. Smyth, Forest Hill; Mr. A. Pain; Mr. Howlett, Norwood; Dr. Cassells, Glasgow; Mr. George, Whitchurch; Dr. M'Naughton, Southsea; Dr. Tibbits, Bradford; Mr. R. C. Lucas, London; Dr. Foster, Birmingham; Dr. Wicks, Newcastle; Mr. Mold, Dereham; Mr. Garrod, London; Mr. C. Wigg, Derby; Dr. Morgan, Chirk; Mr. Osborne, Gosport; Dr. Stephenson, Blackburn; Mr. Woods, Liverpool; Mr. Tuck, Seaford; Mr. Feldmann, Dalston; Mr. Bateman, London; Mr. Patterson, Liverpool; Mr. Snell, Sheffield; Dr. Hicks, Burgess Hill; Mr. Rean, Gunnislake; Mr. Field, London; Dr. Christie, Stafford; Dr. Goodheart, London; Mr. Stretton, Kidderminster; Mr. Cole, Warwick; M. C. A.; Asiom; An Observer; H. G.; Medicus; M.R.C.S.; E. J. S. K.; M.D.; Disjecta Membra; H. E.; A.; Alpha, Huddersfield; Emigrant; Etiquette, R. and R.; L.R.C.P.; &c. &c.

LETTERS, *each with enclosure*, are also acknowledged from—Dr. Pinden, London; Dr. Crowther, Luddenden; Dr. Wilson, Yoxall; Mr. Wheeler, Manchester; Mr. King, Camberwell; Mr. Thurston, Hastings; Mr. Read, Furneaux Pelham; Dr. Long, Wells; Mr. Buller, Chumleigh; Messrs. Smith and Son, Birmingham; Dr. Dixon, Buxton; Dr. Booth, Oswaldtwistle; Dr. M'Kinder, Gainsborough; Mr. Thompson, Edinburgh; Mr. Manners, Rugeley; Mr. Holloway, Minster; Mr. Rideal, Woolwich; Messrs. Holbrook and Son, Portsmouth; Mr. Scott, Manchester; Mr. Love, London; Mr. Ottaway, Salisbury; Mr. Chorley, Warrington; Mr. Maile; Messrs. Smith and Son, Dublin; Mrs. Woods, Arcachon; Medicus, Edinburgh; H. H.; M. S.; B. Z., Eastbourne; Velo, Torquay; R. H. H., Belper; Omicron, Preston; M.D.; Medicus, Oxford; R. H. H., Birmingham; R. S. B.; R. J., Pontymister; Alpha, Peterborough; Surgeon, Southsea; M. D. L.; Medicus, Leadgate; C. E., Duncon; Veritas, Ventnor; J. H. V., Lynn; Conrad; G. J. A., Cadby; Ellis, Barnsley; Medicus, Tunstall; Querceto; Beta, Kington; Surgeon, Great Grimsby; A. B. C., St. John's-wood; M. B., Edinburgh; Medicus; Beta; N. Q. D.; M. H., Farningham; N. G., Nottingham; Alpha; Hoe; Practitioner.

Hackney Express, Spiritualist, Argus, Herald, Daily Evening Post, Western Morning News, Secular Review, Glasgow Herald, Bradford Observer, Hexham Courant, Huddersfield Daily Examiner, Bridlington Free Press, Birmingham Daily Post, Daily Courier, &c., have been received.

METEOROLOGICAL READINGS.

(Taken daily at 8 a.m. by Steward's Instruments.)

THE LANCET OFFICE, Oct. 22nd, 1879.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Oct. 17	29·88	W.	38	35	..	57	36	..	Overcast
,, 18	29·96	N.W.	45	42	..	53	42	..	Fine
,, 19	29·50	W SW	59	57	..	61	58	..	Overcast
,, 20	29·35	WNW	51	47	..	57	43	0·16	Cloudy
,, 21	29·87	N.W.	45	43	..	53	41	..	Hazy
,, 22	30·02	W.	48	47	..	54	41	..	Foggy
,, 23	30·04	WNW	55	53	..	57	46	0·03	Foggy

Medical Diary for the ensuing Week.

Monday, Oct. 27.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10½ A.M. each day, and at the same hour.
ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.
ST. MARK'S HOSPITAL.—Operations, 2 P.M.
METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.
ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
MEDICAL SOCIETY OF LONDON.—8½ P.M. Mr. Royes Bell will show a Case of old-standing Ununited Fracture of Patella treated by Incision into Joint and Wireing Fragments together.—Dr. S. O. Habershon, "On the Passage of Gall-stones."—Dr. Drysdale, "On the Mortality of the Rich and the Poor."

Tuesday, Oct. 28.

ST. MARK'S HOSPITAL.—Operations, 9 A.M.
GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.
WESTMINSTER HOSPITAL.—Operations, 2 P.M.
NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.
WEST LONDON HOSPITAL.—Operations, 3 P.M.
ROYAL MEDICAL AND CHIRURGICAL SOCIETY.—8½ P.M. Report of the Committee on Suspended Animation, and the Comparative Merits of the Methods used by the Royal Humane Society and that of Dr. Benjamin Howard.—Dr. Miller Ord and Dr. Brodie Sewell, "On a large Dermoid Cyst in the Abdomen of a Man."—Dr. Miller Ord, "On a Malformation of the Genital Organs of a Man."—Mr. W. Pye: "Removal of the Diaphysis of the Tibia for Acute Necrosis."

Wednesday, Oct. 29.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
ST. THOMAS'S HOSPITAL.—Operations, 1½ P.M., and on Saturday at the same hour.
KING'S COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at 1 P.M.
LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.
GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.
UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M., and on Saturday at the same hour.
SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2½ P.M.
HUNTERIAN SOCIETY.—8 P.M. Dr. F. C. Turner, "On a Case of Myocarditis."—Mr. Gilbert, "On a Case of Fever."—Mr. G. T. B. Stevens will exhibit a peculiar Fœtus.

Thursday, Oct. 30.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.
ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.
CHARING-CROSS HOSPITAL.—Operations, 2 P.M.
CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

Friday, Oct. 31.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.
ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.
ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

Saturday, Nov. 1.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

TERMS FOR ADVERTISING IN THE LANCET.

For 7 lines and under.... £0 4 6 | For half a page £2 12 0
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